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A STUDY OF PREMIUM STABILITY

IN COMPULSORY AUTOMOBILE INSURANCE

BY THE ALBERTA AUTOMOBILE INSURANCE BOARD
FOR THE MINISTER OF CONSUMER AND CORPORATE AFFAIRS
OF THE GOVERNMENT OF ALBERTA

Volume 2

A STUDY OF PREMIUM STABILITY IN COMPULSORY AUTOMOBILE INSURANCE

BY THE ALBERTA AUTOMOBILE INSURANCE BOARD

FOR THE MINISTER OF CONSUMER AND CORPORATE AFFAIRS

OF THE GOVERNMENT OF ALBERTA

SEPTEMBER 1991

Volume 2

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APPENDIX 1

LIST OF PARTICIPANTS IN CLAIM SURVEY

Alberta Motor Association Insurance Company
Allstate Insurance Company
Canada West Insurance Company
Continental Insurance Management Limited
Co-operators General Insurance Company
Dominion of Canada Group
General Accident Assurance Company of Canada
Guardian Insurance Company of Canada
Peace Hills General Insurance Company
Portage La Prairie Mutual Insurance Company
Prudential Assurance Company Limited
Royal Insurance Company of Canada
State Farm Mutual Automobile Insurance Company
Wawanesa Mutual Insurance Company
Wellington Insurance Company
Western Union Insurance Company
Zurich Canada

APPENDIX 2

REPORT ON
ALBERTA MOTOR VEHICLE
CLAIM SURVEY

Prepared by:

Joe S. Cheng, F.C.A.S., F.C.I.A.

27 August 1991

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ACTUARIES AND CONSULTANTS
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OBJECTIVE

We have been retained by the Alberta Automobile Insurance Board to conduct two surveys of Alberta automobile insurance claims.

The purpose of these two surveys was to determine who was compensated, how much compensation was paid, the breakdown of compensation paid through first and third party automobile insurance, and from what sources the compensation was derived. The surveys were also designed to identify the transaction costs and the timeliness of the automobile insurance payments. The claims surveys were designed to:

1. Distribute the liability claims paid into their major components in order to determine what was paid for specific kinds of compensation including:
    (a) pre-judgement interest,
    (b) gross up for income tax,
    (c) past income loss,
    (d) future income loss,
    (e) nonpecuniary loss,
    (f) party and party cost,
    (g) future care cost,

    and to distribute the accident benefits claim dollars by benefit type.

2. Compile a profile of both accidents (type of accident and degree of fault) and the injured making first or third party claims (social, economic characteristics of claimant, type and extent of injuries, degree of fault of claimants in accident and estimates of actual losses).

3. Collect information concerning processing of the claims. This includes information on the timeliness of payment and settlement, the use of counsel and the courts, and the amount of payments made and the transaction cost involved.

4. Collect information on the sources and the amount of compensation received by those who are injured in motor vehicle accidents.

5. Estimate the annual inflation rate of liability claims.

To deal with these issues, we designed and conducted two surveys: one involving bodily injury claims and the other involving accident benefits claims.

METHODOLOGY

Standard statistical sampling techniques were used. In total, 1,340 bodily injury survey forms and 1,260 accident benefit survey forms were submitted. Past experience in another similar study showed that this sample size is sufficient to reproduce a reasonable representation of automobile insurance claimants in Alberta.

To ensure that the sample will accurately reflect geographical distribution of claims across the province and the mix of vehicle types, two controls were placed on the random sampling process. The confidential claims information of 23 automobile insurance companies were provided by the Insurance Bureau of Canada for our review. From these 23 companies, an appropriate number was chosen (18 for both bodily injury and accident benefits surveys) so that the resulting sample would exhibit a claims distribution by region similar to that of the entire industry. Each sample included two direct writing companies because differences in distribution systems were considered to be significant. To ensure that the result of the surveys will have credible data for vehicles other than private passenger cars, we drew the claims from two strata: private passenger cars and others (which included commercial vehicles, taxis, and motorcycles). Unfortunately, not all the claims from the "others" category were returned. Therefore, the results for the non-private passenger cars were not as reliable as the private passenger cars.

BODILY INJURY LIABILITY CLAIMS SURVEY

The 18 insurers were asked to submit, in either magnetic form or hard copy, complete lists of Alberta automobile bodily injury claims settled in 1988 and 1990. To eliminate the uncertainty arising from the adequacy of reserves, only closed liability claims were used. The number of claims required from each company were struck to reflect the geographic distribution and differences in marketing methods. The required number of claims were randomly selected from the lists. The companies were given claim identification numbers and instructions to complete the survey forms.

As an internal check, the summarized results of non-economic indicators for settlements in 1988 were compared against settlements in 1990. No material difference was noted. We concluded that the sample was sufficiently reliable for the study.

In addition, two specific external checks corroborated the results of the survey.

The first check was a gross weekly wage comparison. The average gross weekly wage (trended from the accident date to the settlement date @ 5.0% p.a.) for liability claimants in the survey were $458 and $503 for 1988 and 1990 respectively. The weekly average industrial wage in Alberta in 1988 and 1990 were $462.76 and $518.60 respectively. Thus, the liability claimants in the bodily injury claims survey were representative of the provincial average.

The second check was an age distribution comparison of bodily injury claimants with licensed drivers and drivers involved in accidents data. The percentage of liability claimants in each group corresponds closely with the external data.

Age	Licensed Drivers* %	Drivers involved in accidents** %	Liability Claimants %
Under 16	1.5	1.9	4.1
16 - 24	17.9	29.7	17.1
25 - 34	29.7	28.3	31.9
35 - 44	22.2	17.3	19.7
45 - 54	12.7	9.2	12.9
55 - 64	9.0	6.2	7.7
65 & over	7.0	4.9	6.6
Unspecified source	-	2.5	-

* Alberta Traffic Collision Statistics 1989, Table 4.1
** Alberta Solicitor General -- Motor Vehicles Division, Operator Statistics, 31 December 1989

ACCIDENT BENEFITS CLAIMS SURVEY

The 18 insurers were asked to submit, in either magnetic form or hard copy, complete lists of Alberta automobile accident benefits claims settled in either 1988 and 1990. To eliminate the uncertainty arising from the adequacy of reserves, only closed accident benefits claims were used. The number of claims required from each company were struck to reflect the geographic distribution and differences in marketing methods. The required number of claims were randomly selected from the lists. The companies were given claim identification numbers and instructions to complete the survey forms.

As an internal check, the summarized results of non-economic indicators for settlements in 1988 were compared against settlements in 1990. No marked difference was noted. We concluded that the sample size was sufficiently reliable for the study.

In addition, two specific external checks corroborated the results of the survey.

The first check was a gross weekly wage comparison. The average gross weekly wage (trended from the accident date to the settlement date @ 5.0% p.a.) for accident benefits claimants in the survey were $431 and $483 for 1988 and 1990 respectively. The weekly average industrial wage in Alberta in 1988 and 1990 were $462.76 and $518.60 respectively. Thus, the accident benefits claimants considered in the survey were not representative of the provincial average; they were consistently about 7% lower. This was to be expected since most high wage earners received compensation from other sources such as employer sponsored health insurance programs and may not appear as accident benefits claimants.

The second check was an age distribution comparison of accident benefits claimants with licensed drivers and drivers involved in accidents data. The percentage of accident benefits claimants in each age group corresponds closely with the external data.

Age	Licensed Drivers* %	Drivers involved in accidents** %	Accident Benefit Claimants %
Under 16	1.5	1.9	3.7
16-24	17.9	29.7	16.9
25 - 34	29.7	28.3	30.7
35 - 44	22.2	17.3	22.9
45 - 54	12.7	9.2	13.6
55 - 64	9.0	6.2	6.7
65 & over	7.0	4.9	5.5
Unspecified source	-	2.5	-

* Alberta Traffic Collision Statistics 1989, Table 4.1
** Alberta Solicitor General -- Motor Vehicles Division, Operator Statistics, 31 December 1989

DEFINITIONS

Note:

Throughout the report, two terms have specific meaning in an insurance context and the following should be noted:

Claim.

A claim is a file in which one or more claimants have received payments from the insurance company reporting the data. A claim can be for first party coverage or third party liability coverage.

An insurance company participating in both surveys may report a third party liability claim and a first party accident-benefit claim arising from the same accident, if both claims were in our respective samples.

Claimant.

A claimant is a person who has received payment from the insurance company reporting the data. A person who makes a claim, but does not receive payment, is not considered a claimant in this survey.

These definitions may not be the same as those used by the insurance companies.

The Insurance Bureau of Canada defines a claim differently in its statistical plan. It does not define claimant.

FINDINGS

While the claims surveys covered all vehicle types, our findings addressed only private passenger cars.

1. **Who were being compensated by the automobile insurance system.** From the surveys, we found that about two-thirds of the claimants are employed at the time of the accident. The breakdown of the claimants are as follows:

	Liability	Accident Benefits
Employed full time	56.4%	59.5%
Employed part time	7.6	5.5
Student - 16 & over	7.0	5.6
Retired	4.9	3.9
Unemployed	6.7	6.2
Homemaker	5.9	7.5
Preschooler	5.6	3.8
Other	5.9	8.0
	100.0	100.0

Roughly two-thirds of the injured persons were not at-fault since only the driver of the at-fault vehicle was responsible for the accident. Passengers or pedestrians were usually not at-fault parties.

Over half of the claimants had soft tissue injuries, and they had 25% of the claim amount. About 10% of the claimants had injuries which were of a permanent nature, but about 3% of the claimants had permanent and total disability.

2. **What were the damages compensated for by the automobile insurance system?** The automobile insurance system compensated personal injuries differently dependent on the degree of fault of the injured party. All insured persons were covered by some form of accident benefits regardless of fault.

When another insured party is partly (or wholly) responsible for the accident, the injured person can obtain tort benefits through the third party's insurer in addition to accident benefits from his own insurer. In 1990, we found that compensation was made under the following heads of damages.

Head of damage	Liability	Claims under $10,000	Claims Between $10,0001 & 75,000	Claims over $75,000
Past employment income	14.6%	7.6%	21.4%	11.0%
Out-of-pocket expense	5.8%	3.7%	6.3%	6.4%
Future employment income	18.6%	0.2%	3.4%	45.1%
Future care	3.3%	0.2%	0.7%	7.8%
Non-pecuniary	47.7%	83.1%	57.1%	18.2%
Gross up for tax		0.8%	0.0%	0.0%2.0%
Fund management	0.2%	0.0%	0.0%	0.6%
Party & party cost	5.2%	4.0%	6.5%	4.5%
Prejudgment interest	3.9%	1.2%	4.7%	4.5%
	100.1%	100.0%	100.1%	100.1%

Records with legal counsel but no party and party cost were adjusted by reducing the corresponding non-pecuniary loss amount. As a result, the percentage of claims amount payable under party and party cost was 5.2% versus 2.8% in the raw data.

For accident benefits, we found that compensation was made under the following types of benefit in 1990:

Benefit Type	Accident Benefits
Medical	35.3%
Long term care	0.5%
Chiropractor	1.8%
Rehabilitation	1.3%
Funeral	2.7%
Death -- principal sum	8.4%
Death -- survivor benefit	7.2%
Disability -- self	40.0%
Disability -- spousal	0.7%
Other	2.1%
	100.0%

3. **Where were the compensation dollars from?** For claimants eligible for tort benefits, they would receive an average of $15,842 from the following sources:

Source	Amount	% of total
Liability insurer	$ 14,645	92.5
Own auto insurer	978	6.2
Employer	197	1.2
U.I.C.	20	0.1
Personal A&S insurance	2	0.0
	$ 15,842	100.0

Accident benefits are paid irrespective of fault; claimants with non-permanent injuries, permanent injuries, and fatalities received on average, about $3,096, $29,824, and $7,979, respectively. By source of compensation, we have:

Non-Permanent Injuries

Source	Amount	% of total
Own auto insurer	2,319	74.9
Employer	684	22.1
U.I.C.	68	2.2
Personal A&S ins.	25	.8
Total	3,096	100.0

Permanent Injuries

Source	Amount	% of total
Own auto insurer	10,605	35.6
Employer	15,406	51.7
U.I.C.	483	1.6
Personal A&S ins.	3,329	11.2
Total	29,824	100.0

Fatalities

Source	Amount	% of total
Own auto insurer:		
Funeral	986	12.4
Death - Principal Sum	3,749	47.0
Death - Survivor Benefit	3,244	40.7
Total	7,979	100.0

4. **Adequacy of the compensation dollars.** A person with non-permanent disability eligible for tort benefits received $15,842 on average in 1988-1990. His wage loss was about $6,991 and he had about $1,130 out-of-pocket expenses which were fully reimbursed. Therefore, he received $14,712 (15,842 - 1,130) for his pain and suffering, and wage loss.

The following illustrates the level of benefits:

(1) wage loss	$ 6,991	100.0%
(2) tort income replacement	4,152	59.4%
(3) acc. benefit - income replacement	823	11.8%
(4) U.I.C.	20	0.3%
(5) Employer	197	2.8%
(6) Personal A&S ins.	2	0.0%
(7) Total income replacement (2) to (6)	5,194	74.3%
(8) Other tort benefits	9,503	135.9%
(9) Other acc. benefits	15	0.2%
(10) All benefits (excl. medical)	14,712	210.4%

In comparison, if the above individual was 32 and suffered a permanent and total disability, he would receive $43,878 for income replacement and an additional $7,854 for medical and out-of-pocket expenses. The following illustrates the level of benefits:

Tort Income Replacement	$7,585
Accident Benefits	
Income Replacement	$3,191
U.I.C.	$0
Employer	$2,055
Personal	$0
Total Income Replacement	$12,831
Other Tort Benefits (Excluding Medical)	$31,047
Other Accident Benefits (Excluding Medical)	$0
Total Compensation	$43,878
Total Medical	$7,819
Accident Benefits Medical	$35
Average Age	32

Finally, in the case of fatality, the estate would receive about $111,443.

Tort Income Replacement	$1,179
Accident Benefits	
Income Replacement	$0
U.I.C.	$0
Employer	$0
Personal	$0
Total Income Replacement	$1,179
Other Tort Benefits (Excluding Medical)	$100,582
Other Accident Benefits (Excluding Medical)	$8,214
Total Compensation	$109,975
Total Medical	$1,438
Accident Benefits Medical	$30
Average Age	36

On average, claimants receive the following from accident benefits depending on the type of injury:

Type of injury	Compensation	Wage Loss	% of wage loss
Non-permanent	$ 3,096	$7,760	39.9
Permanent	29,824	n/a	n/a
Fatality	7,979	n/a	n/a

5. **When were automobile insurance claim dollars paid?** Due to the nature of liability claims, delay in final payment was to be expected. The median claim was usually settled in 18 months. As many as 12% were still pending 36 months after the accident.

Accident benefits are paid regardless of fault. In 1990, approximately 20% of the claimants received a cheque within 4 weeks of the accident and about a third of the claimants had to wait more than 4 months from the date of the accident. 83% of the accident benefits claims were reported within a week of the accident, but the median claimant took over 4 weeks to submit an application for benefits. Once an application has been received, 50% of the claimants would receive a cheque within a week, 22% of the claimants would receive a cheque in more than a week but within 4 weeks while 28% had to wait for more than 4 weeks to get their first cheque.

It appears that the majority of the delay in accident benefits payment lies in the tardiness of application for benefits. In order to expedite accident benefit payments, the application for benefits must be simplified and the process streamlined.

6. **Transaction costs for liability claims.** The total transaction cost divided by the number of claimants worked out to $1,339 per claimant. It was about 13% of the total liability payments. The breakdown of these transaction costs are:

Category	Amount	% of transaction cost
Outside legal defense	$ 785	58.6
In-house legal defense	35	2.6
Indep. adjuster	327	24.4
Medical/expert fee	163	12.2
Other	29	2.2
	$ 1,339	100.0

7. **Inflation rate of liability claims.** Claims of all injury types were increasing at approximately 12.9% per annum (more than twice the Consumer Price Index increase). Claimants with counsel received more claim dollars for similar injuries. Furthermore, their rate of increase from 1988 to 1990 was higher than the claimants without counsel (14.0% vs. 10.9%). The following table shows the annual claim inflation rate by category of claim.

Type of Injury	Represented by Counsel	Average Claim Size 1988	1990	Annual Increase
Soft Tissue Only	no	$2,830	$3,554	+12.1%
Soft Tissue Only	yes	$7,459	$9,350	+12.0%
Other	no	$3,233	$3,947	+10.5%
Other	yes	$20,422	$27,433	+15.9%
All	no	$3,042	$3,744	+10.9%
All	yes	$15,358	$19,954	+14.0%

As salary increase is between 4% to 6% per annum from 1988 to 1990, one can only conclude that the increase in non-pecuniary loss is the major cause of double digit inflation in liability claims.

8. **Use of the court system.** 50% of the liability insurance claimants were represented by counsel; the rate had not changed from 1988 to 1990. One-quarter of the cases had commenced action. About 10% had started examination for discovery; 1% had pre-trial, and less than 1% had gone through trial.

Alberta
AUTOMOBILE INSURANCE
BOARD

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GENERAL INSTRUCTIONS

1. Indicate company number, your initials and claim number clearly for future reference.

2. This survey form is to be completed for each claimant. For example, if an accident gives rise to three claimants, three separate forms have to be completed.

3. All dollar figures are in whole dollars. Absolutely no cent should be shown.

4. All dollar figures which should balance to the answers of other questions will be checked.

5. All dates are in international convention. They are shown as year, month and day. Where necessary, you must use leading zeros; eg., you must code January 9, 1988 as 88 01 09.

6. Where a dollar amount is expected, a blank will imply 0.

7. Where a check mark "X" or a selection "a number" is expected, you MUST pick the most appropriate category. Otherwise, the diskette may be returned.

ALBERTA AUTOMOBILE INSURANCE BOARD

MOTOR VEHICLE THIRD PARTY LIABILITY CLAIM SURVEY

---

[1] Company number |_|_|_|

[2] Your initials |_|_|_|

[3] Claim number |_|_|_|_|_|_|_|_|_|_|_|_|_|_|

[4] Claimant number |_|_|_|
(including claim without payment
but must have injury)

[5] Date of accident YY |1|9|_|_| MM |_|_| DD |_|_|

[6] Date claim was notified to your company YY |1|9|_|_| MM |_|_| DD |_|_|

[7] Coverage (check all which are applicable) |_| B.I. |_| P.D.
|_| SEF 42/44

[8] Place of accident (check one box) |_| Alberta
|_| other jurisdictions in Canada |_| U.S.A.

[9] Policy limit (section A) |_|_|_|_|0|0|0| Complete the next limit figure if applicable, limit has been reduced to |_|_|_|_|0|0|0| due to breach of policy conditions.

ALBERTA AUTOMOBILE INSURANCE BOARD

[10] Claimant category |__|

1:	third party driver	5:	passenger (not named insured) in insured's vehicle
2:	third party passenger		
3:	named insured driver	6:	pedestrian or cyclist
4:	named insured passenger in insured's vehicle	7:	other

[11] Sex of claimant |__| 1: male 2: female

[12] Date of birth of claimant YY |1|9|__|__| MM |__|__| DD |__|__|

[13] Accident type |__| 1: single vehicle 2: multiple vehicle

[14] Type of vehicles involved in the accident:

|__| insured's vehicle |__| third party's vehicle (if applicable)

1:	car	2:	pick-up truck/van	3:	motorcycle
4:	bus	5:	snow vehicle	6:	ATV
7:	heavy truck (over 4 tonnes or 10,000 pounds)	8:	taxi	9:	other

[15] Description of insured's vehicle: model year |__|__|__|__| IBC Vehicle code |__|__|__|__|

Make of vehicle |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

[16] Description of third party's vehicle: model year |__|__|__|__| IBC Vehicle code |__|__|__|__|

Make of vehicle |__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|__|

[17] Degree of fault (based on your assessment): driver of insured vehicle |__|__|__| %

claimant |__|__|__| % The two figures need not add up to 100%.

[18] Date the file was closed (as determined by your computer records).

YY |1|9|_|_| MM |_|_| DD |_|_|

[19] Condition of claimant |_| 1: deceased 2: injured 3: not injured

If the answer is 1 or 3, then go to question 22.

[20] Is it likely that the injury will be of a permanent nature?

|_| No |_| Yes |_| Maybe

If the answer is yes or maybe, indicate in the next question which injury type prompts you to draw this conclusion.

[21] Type of injury (Check more than one if necessary)

INSTRUCTION: first check the part(s) of the body injured, then check the type(s) of injury corresponding to the part of the body. Also include whether the injury is of a permanent nature.

Part of Body	Injury of a Permanent Nature	Description of Injury
|_| 99 none	|_|	|_| nominal value (shaken up)
	|_|	|_| psychological trauma
|_| 0 brain or	|_|	|_| paraplegic or quadraplegic
spinal column	|_|	|_| other

ALBERTA AUTOMOBILE INSURANCE BOARD

[21] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
⌊⌋ 1 head	⌊⌋	⌊⌋ fracture
	⌊⌋	⌊⌋ concussion
⌊⌋ 2 face	⌊⌋	⌊⌋ fracture
	⌊⌋	⌊⌋ laceration with serious scar
	⌊⌋	⌊⌋ laceration - no scar
⌊⌋ 3 eye	⌊⌋	⌊⌋ partial loss or loss of use of 1 or 2 eyes
	⌊⌋	⌊⌋ total loss or loss of use of 1 or 2 eyes
⌊⌋ 4 ears	⌊⌋	⌊⌋ partial loss or loss of use of 1 or 2 ears
	⌊⌋	⌊⌋ total loss or loss of use of 1 or 2 ears
⌊⌋ 5 nose	⌊⌋	⌊⌋ resulting in disfigurement
	⌊⌋	⌊⌋ no disfigurement

[21] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
⌊⌋ 6 teeth and jaw	⌊⌋	⌊⌋ fracture
	⌊⌋	⌊⌋ loss of teeth
	⌊⌋	⌊⌋ other
⌊⌋ 7 voice and larynx	⌊⌋	⌊⌋ loss of voice
	⌊⌋	⌊⌋ other
⌊⌋ 8 neck	⌊⌋	⌊⌋ soft tissue
	⌊⌋	⌊⌋ vertebrae/disc fracture
	⌊⌋	⌊⌋ psychological trauma
⌊⌋ 9 back	⌊⌋	⌊⌋ soft tissue
	⌊⌋	⌊⌋ vertebrae/disc fracture
	⌊⌋	⌊⌋ psychological trauma
⌊⌋ 10 chest and ribs	⌊⌋	⌊⌋ fracture
	⌊⌋	⌊⌋ other

[21] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
⊥⊥ 11 internal organs	⊥⊥	⊥⊥ surgery is required
	⊥⊥	⊥⊥ other
⊥⊥ 12 shoulder	⊥⊥	⊥⊥ soft tissue
	⊥⊥	⊥⊥ fracture
	⊥⊥	⊥⊥ laceration
	⊥⊥	⊥⊥ other
⊥⊥ 13 arm and hand	⊥⊥	⊥⊥ fracture
	⊥⊥	⊥⊥ loss of arm or hand
	⊥⊥	⊥⊥ loss of both arms or hands
	⊥⊥	⊥⊥ laceration
	⊥⊥	⊥⊥ loss of fingers
	⊥⊥	⊥⊥ other

[21] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 14 elbow	☐	☐ fracture
	☐	☐ other
☐ 15 wrist	☐	☐ fracture
	☐	☐ other
☐ 16 pelvis and hip	☐	☐ fracture
	☐	☐ other
☐ 17 leg and foot	☐	☐ fracture
	☐	☐ loss of leg or foot
	☐	☐ laceration
	☐	☐ loss of both legs or feet
	☐	☐ other

[21] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
⌊⌋ 18 knee	⌊⌋	⌊⌋ soft tissue
	⌊⌋	⌊⌋ fracture
	⌊⌋	⌊⌋ other
⌊⌋ 19 ankle ⌊⌋		⌊⌋ fracture
	⌊⌋	⌊⌋ other

[22] Employment status at time of accident of claimant ⌊⌋

1:	employed full-time	2:	employed part-time
3:	student - 16 and over	4:	retired
5:	unemployed	6:	homemaker
7:	preschooler/student under 16	8:	other

[23] Gross (weekly) employment income of claimant $ ⌊⌋⌊⌋⌊⌋⌊⌋

Number of months employed during the 12 months preceding the date of accident ⌊⌋⌊⌋

[24] Amount of actual time loss of claimant: ⌊⌋⌊⌋ Yrs. ⌊⌋⌊⌋ Wks. ⌊⌋ Days including intermittent time off. Use your best estimate here, do not leave it blank.

⌊⌋ permanently disabled

ALBERTA AUTOMOBILE INSURANCE BOARD

[25] Settlement, or breakdown of award if case tried:

(a) Special damages up to date of trial or settlement:

loss of employment income	$ |_|_|_|_|_|_|_|
other income loss (not employment income)	$ |_|_|_|_|_|_|_|
other out of pocket expense	$ |_|_|_|_|_|_|_|
sub-total	$ |_|_|_|_|_|_|_|

(b) General damages:

non-pecuniary	$ |_|_|_|_|_|_|_|
future employment income	$ |_|_|_|_|_|_|_|
future care	$ |_|_|_|_|_|_|_|
gross-up for tax	$ |_|_|_|_|_|_|_|
fund management	$ |_|_|_|_|_|_|_|
sub-total	$ |_|_|_|_|_|_|_|

(c) Party and party costs including disbursements $ \|_\|_\|_\|_\|_\|_\|_\|

(d) Prejudgement interest $ \|_\|_\|_\|_\|_\|_\|_\|

\|_\| stated in settlement

\|_\| estimated

Grand total 25(a)+25(b)+25(c)+25(d) $ \|_\|_\|_\|_\|_\|_\|_\|

[26] Breakdown of allocated claims expenses (exclude staff adjuster):

(a) Fees paid to outside lawyer $ |_|_|_|_|_|_|_|_|

(b) Fees paid to independent adjuster $ |_|_|_|_|_|_|_|_|

(c) Fees paid to defence medical $ |_|_|_|_|_|_|_|_|

(d) Fees paid to other experts $ |_|_|_|_|_|_|_|_|

(e) Other $ |_|_|_|_|_|_|_|_|

[27] Fees allocated to in-house lawyer $ |_|_|_|_|_|_|_|_|

[28] Section B benefits from claimant's insurer (provide information from your file).

name of insurer of the claimant (if there is one) |_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|_|

medical	$ |_|_|_|_|_|_|_|		
long term care	$ |_|_|_|_|_|_|_|		
chiropractor	$ |_|_|_|_|_|_|_|		
rehabilitation	$ |_|_|_|_|_|_|_|		
vocational training	$ |_|_|_|_|_|_|_|		
funeral	$ |_|_|_|_|_|_|_|		
death - principal sum	$ |_|_|_|_|_|_|_|		
death - survivor benefit	$ |_|_|_|_|_|_|_|	|_|_|_|	Weekly benefit
disability - employed	$ |_|_|_|_|_|_|_|	|_|_|_|	Weekly benefit
disability - spousal	$ |_|_|_|_|_|_|_|	|_|_|_|	Weekly benefit
other	$ |_|_|_|_|_|_|_|		
total	$ |_|_|_|_|_|_|_|		

[29] Property Damage Payments:

Third Party Vehicle Damage $ |_|_|_|_|_|_|_|

Other Property Damage $ |_|_|_|_|_|_|_|

[30] Collision payments to your insured $ |_|_|_|_|_|_|_|

Deductible paid by your insured $ |_|_|_|_|

|_| No collision coverage

TYPE OF COLLATERAL BENEFITS AVAILABLE TO THE CLAIMANT For questions 31 to 33: Try your best to fill in the amount.

[31] Government Program

U.I.C.

Weekly benefit $ |_|_|_|_| Duration |_|_|_|_| weeks

Total amount $ |_|_|_|_|_|_|

[32] Employer-sponsored salary continuance insurance programs (e.g. long term disability)

Weekly benefit $ |_|_|_|_| Duration |_|_|_|_| weeks

Total amount $ |_|_|_|_|_|_|

[33] Personal insurance

Weekly benefit $ |_|_|_|_| Duration |_|_|_|_| weeks

Total amount $ |_|_|_|_|_|_|

[34] How many of your insureds received accident benefits from your company as a result of this accident? |_|_|

[35] Total amount of accident benefits paid and payable to your insureds.

$ |_|_|_|_|_|_|

[36] How many of your insureds are permanently disabled? |_|_|

1st insured:	Weekly benefit	$ |_|_|_|
2nd insured:	Weekly benefit	$ |_|_|_|
3rd insured:	Weekly benefit	$ |_|_|_|
4th insured:	Weekly benefit	$ |_|_|_|

[37] Additional information (check yes or no):

		Yes	No
(a)	Was claimant represented by counsel?	|_|	|_|
(b)	Was action commenced?	|_|	|_|
(c)	Was there examination for discovery?	|_|	|_|
(d)	Was case pre-tried?	|_|	|_|
(e)	Was case tried by jury?	|_|	|_|
(f)	Was there an appeal?	|_|	|_|
(g)	If appealed, was case appealed by plaintiff?	|_|	|_|

ALBERTA AUTOMOBILE INSURANCE BOARD

[38] Indicate when settlement was concluded (check only ONE):

(a)	before action commenced	⌊_⌋
(b)	after action commenced but before examination for discovery	⌊_⌋
(c)	after examination for discovery but before pre-trial	⌊_⌋
(d)	at pre-trial or as an immediate consequence (i.e., within 10 days) of pre-trial	⌊_⌋
(e)	between pre-trial and date action called for trial	⌊_⌋
(f)	at trial	⌊_⌋
(g)	after trial	⌊_⌋

[39] Did gross value of claim exceed policy limit in question 9? Yes ⌊_⌋ No ⌊_⌋

[40] Was the claim a structured settlement? Yes ⌊_⌋ No ⌊_⌋

If yes, answer the following:

(a)	gross amount of claim [from question 25]	$ ⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋
(b)	interim and other payments	$ ⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋
(c)	party and party costs [from 25(c)]	$ ⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋
(d)	cost of annuity [must equal 40(a) - (b) - (c)]	$ ⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋
(e)	brokerage fee or other fee (if known)	$ ⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋

[41] IBC statistical territory code ⌊1⌋⌊0⌋⌊_⌋ of your insured vehicle.

[42] IBC class code (i.e., type of use) ⌊_⌋⌊_⌋⌊_⌋ of your insured vehicle.

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 5 - YEAR OF ACCIDENT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	464	473	66	71
	PRIVATE PASSENGER % accidents		OTHER % accidents	
DURING OR BEFORE 1984	9.3	2.5	15.2	4.2
DURING 1985	7.5	2.1	12.1	9.9
DURING 1986	20.5	6.1	24.2	2.8
DURING 1987	32.1	7.8	22.7	7.0
DURING 1988	30.6	27.9	25.8	26.8
DURING 1989	0.0	38.7	0.0	31.0
DURING 1990	0.0	14.8	0.0	18.3

QUESTION 6 - DAYS TILL CLAIM WAS REPORTED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	605	74	88
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN ONE WEEK	77.6	81.5	56.8	60.2
ONE WEEK	1.4	1.7	1.4	3.4
TWO WEEKS	6.9	5.6	20.3	13.6
THREE WEEKS	3.3	3.0	4.1	2.3
FOUR WEEKS	1.9	0.8	2.7	3.4
GREATER THAN FOUR WEEKS	8.8	7.4	14.9	17.0

QUESTION 7 - COVERAGES

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	464	473	66	71
	PRIVATE PASSENGER % accidents		OTHER % accidents	
B.I.	99.4	99.6	92.4	95.8
P.D.	76.1	64.3	60.6	71.8
SEF 42	3.7	3.8	3.0	0.0

QUESTION 8 - PLACE OF ACCIDENT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	464	473	66	71
	PRIVATE PASSENGER % accidents		OTHER % accidents	
ALBERTA	95.0	93.0	89.4	93.0
OTHER JUR. IN CANADA	3.9	5.9	9.1	7.0
U.S.A.	1.1	1.1	1.5	0.0

QUESTION 9 - POLICY LIMITS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	464	473	66	71
	PRIVATE PASSENGER % accidents		OTHER % accidents	
UP TO $200,000	6.5	3.4	4.5	5.6
$300,000	3.2	1.5	0.0	0.0
$500,000	45.3	39.1	19.7	9.9
$1,000,000	44.0	54.1	63.6	70.4
OVER $1,000,000	1.1	1.9	12.1	14.1

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 10 - CLAIMANT CATEGORY

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER % claimants		OTHER % claimants	
THIRD PARTY DRIVER	65.0	58.1	51.4	58.0
THIRD PARTY PASSENGER	23.6	27.6	21.6	29.5
NAMED INSURED DRIVER	0.2	0.5	1.4	0.0
NAMED INSURED PASSENGER	0.4	0.8	1.4	1.1
PASSENGER (NOT NAMED INSURED)	2.5	4.9	10.8	6.8
PED.OR CYCLIST	7.7	7.9	12.2	2.3
OTHER	0.7	0.2	1.4	2.3

QUESTION 11 - SEX OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER % claimants		OTHER % claimants	
MALE	46.1	49.3	56.8	47.7
FEMALE	53.9	50.7	43.2	52.3

QUESTION 12 - AGE OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	494	545	68	84
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN 16 YRS	3.0	5.1	0.0	3.6
16 TO 24 YRS	14.0	20.0	13.2	16.7
25 TO 34 YRS.	32.8	31.0	25.0	21.4
35 TO 44 YRS	23.3	16.5	22.1	26.2
45 TO 54 YRS	13.4	12.5	11.8	15.5
55 TO 64 YRS	7.9	7.5	10.3	2.4
MORE THAN 65 YRS	5.7	7.3	17.6	14.3

QUESTION 13 - ACCIDENT TYPE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	464	473	66	71
	PRIVATE PASSENGER % accidents		OTHER % accidents	
SINGLE VEHICLE	9.5	11.4	21.2	8.5
MULTIPLE VEHICLE	90.5	88.6	78.8	91.5

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 14 - TYPE OF VEHICLE INVOLVED (INSURED)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	464	473	66	71
	PRIVATE PASSENGER % accidents		OTHER % accidents	
CAR	76.1	69.3	30.3	29.6
PICK-UP TRUCK	22.6	28.1	39.4	45.1
MOTORCYCLE	0.6	0.2	10.6	8.5
BUS	0.0	0.2	6.1	1.4
SNOW VEHICLE	0.0	0.0	0.0	0.0
ATV	0.0	0.0	0.0	0.0
HEAVY TRUCK	0.0	0.4	13.6	12.7
TAXI	0.0	0.0	0.0	1.4
OTHER	0.6	1.7	0.0	1.4

QUESTION 17 - DEGREE OF FAULT OF DRIVER

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	463	469	66	71
	PRIVATE PASSENGER % accidents		OTHER % accidents	
NONE	2.4	0.9	1.5	4.2
LESS THAN 100%	6.9	10.4	13.6	5.6
100%	90.7	88.7	84.8	90.1

QUESTION 17 - DEGREE OF FAULT OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	521	533	73	86
	PRIVATE PASSENGER % claimants		OTHER % claimants	
NONE	92.1	90.4	90.4	94.2
LESS THAN 100%	6.0	8.3	9.6	4.7
100%	1.9	1.3	0.0	1.2

BODILY INJURY CLAIMS SURVEY RESULTS
BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 18 - NUMBER OF MONTHS TILL CLAIM WAS CLOSED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
LESS THAN 1 MONTH	4.8	2.8	8.1	2.3
UP TO 2 MONTHS	5.3	4.1	1.4	3.4
UP TO 3 MONTHS	6.0	2.6	5.4	1.1
UP TO 4 MONTHS	3.3	3.1	1.4	4.5
4 TO 6 MONTHS	10.4	8.2	13.5	15.9
6 TO 8 MONTHS	7.7	8.4	9.5	2.3
8 TO 10 MONTHS	7.2	6.9	4.1	3.4
10 TO 12 MONTHS	5.8	6.2	5.4	8.0
12 TO 18 MONTHS	11.8	17.4	5.4	13.6
18 TO 24 MONTHS	12.9	14.1	10.8	18.2
24 TO 36 MONTHS	12.0	13.5	21.6	13.6
36 TO 48 MONTHS	6.9	7.9	6.8	4.5
48 TO 60 MONTHS	3.3	2.1	1.4	4.5
MORE THAN 60 MONTHS	2.6	2.6	5.4	4.5

QUESTION 19 - CONDITION OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
DECEASED	1.2	1.1	5.4	1.1
INJURED	93.1	96.1	86.5	96.6
NOT INJURED	5.6	2.8	8.1	2.3

QUESTION 20 - INJURY OF PERMANENT NATURE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
NO	90.8	92.1	83.8	92.0
YES	5.6	5.4	12.2	5.7
MAYBE	3.5	2.5	4.1	2.3

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 21 - TYPE OF INJURY

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER % claimants		OTHER % claimants	
NONE				
NOMINAL VALUE (SHAKEN UP)	15.8	10.3	5.4	3.4
PSYCHOLOGICAL	1.4	1.5	0.0	2.3
BRAIN OR SPINAL COLUMN				
PARAPLEGIC OR QUADRAPLEGIC	0.0	0.2	0.0	0.0
OTHER	0.7	1.3	0.0	0.0
HEAD				
FRACTURE	0.7	1.3	0.0	0.0
CONCUSSION	5.5	6.6	5.4	2.3
FACE				
FRACTURE	0.4	0.3	0.0	1.1
LACERATION WITH SCAR	1.4	1.5	0.0	1.1
LACERATION NO SCAR	4.2	5.4	1.4	3.4
EYE				
PARTIAL LOSS OR LOSS OF USE	0.2	0.8	0.0	0.0
TOTAL LOSS OR LOSS OF USE OF	0.0	0.0	0.0	0.0
EARS				
PARTIAL LOSS OR LOSS OF USE	0.2	0.3	0.0	0.0
TOTAL LOSS OR LOSS OF USE OF	0.0	0.0	0.0	0.0
NOSE				
RESULTING IN DISFIGUREMENT	0.0	0.3	0.0	0.0
NO DISFIGUREMENT	1.1	1.3	4.1	1.1
TEETH AND JAW				
FRACTURE	0.9	0.5	0.0	0.0
LOSS OF TEETH	0.7	1.1	1.4	0.0
OTHER	2.3	2.5	1.4	1.1
VOICE AND LARYNX				
LOSS OF VOICE	0.0	0.0	0.0	0.0
OTHER	0.2	0.2	0.0	0.0
NECK				
SOFT TISSUE	53.9	58.9	41.9	60.2
VERTEBRAE\DISC FRACTURE	0.5	0.5	0.0	0.0
PSYCHOLOGICAL TRAUMA	1.1	1.8	1.4	0.0
BACK				
SOFT TISSUE	32.2	34.0	43.2	53.4
VERTEBRAE\DISC FRACTURE	1.8	0.5	1.4	1.1
PSYCHOLOGICAL TRAUMA	0.9	1.5	0.0	0.0
CHEST AND RIBS				
FRACTURE	2.5	1.5	5.4	1.1
OTHER	3.7	5.9	5.4	3.4
INTERNAL ORGANS				
SURGERY IS REQUIRED	0.2	0.5	4.1	0.0
OTHER	0.9	0.8	0.0	1.1
SHOULDER				
SOFT TISSUE	8.3	10.0	12.2	4.5
FRACTURE	0.5	0.2	1.4	0.0
LACERATION	0.2	0.5	0.0	0.0
OTHER	1.2	1.0	0.0	0.0

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 21 - TYPE OF INJURY continued

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
	% claimants		% claimants	
ARM AND HAND				
FRACTURE	2.1	1.6	5.4	3.4
LOSS OF ARM OR HAND	0.0	0.0	0.0	0.0
LOSS OF BOTH ARMS OR HANDS	0.0	0.0	0.0	0.0
LACERATION	1.4	1.6	0.0	2.3
LOSS OF FINGERS	0.0	0.0	0.0	0.0
OTHER	4.8	6.2	2.7	2.3
ELBOW				
FRACTURE	0.2	0.3	2.7	0.0
OTHER	1.2	2.3	1.4	5.7
WRIST				
FRACTURE	0.7	0.7	1.4	1.1
OTHER	0.7	1.6	0.0	2.3
PELVIS AND HIP				
FRACTURE	1.8	0.8	4.1	2.3
OTHER	3.0	3.0	1.4	4.5
LEG AND FOOT				
FRACTURE	2.5	2.6	4.1	0.0
LOSS OF LEG OR FOOT	0.0	0.0	0.0	0.0
LACERATION	2.1	2.0	0.0	1.1
LOSS OF BOTH LEGS OR FEET	0.0	0.0	0.0	0.0
OTHER	4.0	5.1	6.8	3.4
KNEE				
SOFT TISSUE	4.8	5.3	1.4	3.4
FRACTURE	0.4	1.0	2.7	0.0
OTHER	3.2	1.8	5.4	2.3
ANKLE				
FRACTURE	0.5	0.5	4.1	0.0
OTHER	0.9	2.1	2.7	1.1

QUESTION 22 - EMPLOYMENT STATUS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
EMPLOYED FULL-TIME	57.4	55.3	55.4	45.5
EMPLOYED PART-TIME	6.5	8.7	5.4	4.5
STUDENT - 16 AND OVER	7.4	6.6	6.8	5.7
RETIRED	3.7	6.1	6.8	3.4
UMEMPLOYED	6.9	6.4	4.1	13.6
HOMEMAKER	5.3	6.6	12.2	14.8
PRESCHOOLER	5.8	5.4	2.7	4.5
OTHER	7.0	4.9	6.8	8.0

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 23 - GROSS WEEKLY EMPLOYMENT INCOME

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	326	337	41	40
NUMBER USEABLE	202	220	29	17
	PRIVATE PASSENGER % employed		OTHER % employed	
LESS THAN $200	5.0	5.5	3.4	0.0
$201 TO $300	17.8	21.4	13.8	0.0
$301 TO $400	29.7	23.6	34.5	29.4
$401 TO $500	25.2	24.1	20.7	17.6
$501 TO $600	7.9	9.1	10.3	35.3
$601 TO $700	5.0	5.5	10.3	0.0
$701 TO 800	5.0	6.4	3.4	5.9
$801 TO $900	2.5	2.3	0.0	5.9
$901 TO $1000	1.5	1.4	3.4	5.9
MORE THAN $1000	0.5	0.9	0.0	0.0
AVERAGE $	439.8	448.9	439.2	544.9

QUESTION 23 - NUMBER OF MONTHS EMPLOYED PRECEDING ACCIDENT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	363	390	45	44
NUMBER USEABLE	281	319	32	22
	PRIVATE PASSENGER % employed		OTHER % employed	
LESS THAN 2 MONTHS	1.4	0.9	0.0	0.0
3 MONTHS	0.4	0.3	0.0	0.0
4 MONTHS	0.4	2.5	0.0	0.0
5 MONTHS	0.7	1.3	0.0	0.0
6 MONTHS	3.2	4.4	9.4	9.1
7 MONTHS	0.4	0.3	0.0	0.0
8 MONTHS	0.7	0.6	0.0	4.5
9 MONTHS	0.0	0.3	3.1	0.0
10 MONTHS	0.0	0.3	0.0	0.0
11 MONTHS	0.4	0.0	0.0	0.0
12 MONTHS	92.5	89.0	87.5	86.4

QUESTION 24 - ACTUAL TIME LOSS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	271	284	28	24
	PRIVATE PASSENGER % claimants		OTHER % claimants	
1 WEEK	35.4	35.9	35.7	41.7
2 WEEKS	12.5	12.0	3.6	16.7
3 WEEKS	11.8	10.2	3.6	20.8
4 WEEKS	2.6	2.8	10.7	4.2
2 MONTHS	15.1	13.7	17.9	4.2
3 MONTHS	5.9	8.1	10.7	4.2
4 MONTHS	5.5	6.3	3.6	4.2
5 MONTHS	2.6	2.5	0.0	0.0
6 MONTHS	3.0	2.1	3.6	0.0
7 MONTHS	1.1	1.8	0.0	0.0
8 MONTHS	0.4	0.0	3.6	0.0
9 MONTHS	1.1	0.4	3.6	0.0
10 MONTHS	0.4	0.4	0.0	0.0
11 MONTHS	0.4	0.0	0.0	0.0
12 MONTHS	0.0	0.4	0.0	0.0
2 YEARS	0.0	0.0	0.0	0.0
3 YEARS	0.0	0.0	0.0	0.0
4 YEARS	0.0	0.0	0.0	0.0
5 YEARS	0.0	0.0	0.0	0.0
PERMANENT	2.2	3.5	3.6	4.2

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 25 - TOTAL PAYMENT
CLOSED IN 1988

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS	568		74	
NUMBER USEABLE	568		74	
	PRIVATE PASSENGER		OTHER	
	%$	% claimants	%$	% claimants
LESS THAN $1,000	1.5	27.8	0.6	27.0
$1,001 TO $2,000	2.3	12.0	0.5	6.8
$2,001 TO $3,000	3.1	9.6	1.3	9.5
$3,001 TO $4,000	3.6	8.1	2.2	10.8
$4,001 TO $5,000	3.1	5.5	0.7	2.7
$5,001 TO $6,000	3.7	5.3	1.6	5.4
$6,001 TO $7,000	3.2	3.9	1.9	5.4
$7,001 TO $8,000	2.7	2.8	1.1	2.7
$8,001 TO $9,000	3.3	3.0	0.0	0.0
$9,001 TO $10,000	3.4	2.8	1.4	2.7
$10,001 TO $15,000	9.2	6.0	5.0	6.8
$15,001 TO $20,000	8.4	3.9	6.3	6.8
$20,001 TO $25,000	10.6	3.7	1.8	1.4
$25,001 TO $50,000	15.0	3.5	2.8	1.4
$50,001 TO $75,000	7.3	1.1	9.1	2.7
$75,001 TO $100,000	2.0	0.2	0.0	0.0
$100,001 TO $200,000	6.0	0.4	47.6	6.8
$200,001 TO $300,000	11.5	0.4	16.2	1.4
$300,001 TO $400,000	0.0	0.0	0.0	0.0
$400,001 TO $500,000	0.0	0.0	0.0	0.0
MORE THAN $500,000	0.0	0.0	0.0	0.0

Note: %$ means percentage of total dollars paid to claimants in each band
Note: % claimants means percentage of claimants in each band

QUESTION 25 - TOTAL PAYMENT
CLOSED IN 1990

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS	609		88	
NUMBER USEABLE	609		88	
	PRIVATE PASSENGER		OTHER	
	%$	% claimants	%$	% claimants
LESS THAN $1,000	0.8	18.3	1.2	20.5
$1,001 TO $2,000	1.9	13.7	3.2	14.8
$2,001 TO $3,000	3.0	13.2	2.2	6.8
$3,001 TO $4,000	3.3	10.6	5.3	11.4
$4,001 TO $5,000	2.4	5.9	7.5	12.5
$5,001 TO $6,000	2.9	6.0	2.5	3.4
$6,001 TO $7,000	2.2	3.9	5.9	6.8
$7,001 TO $8,000	1.2	1.8	3.4	3.4
$8,001 TO $9,000	1.6	2.2	1.2	1.1
$9,001 TO $10,000	2.6	3.2	2.9	2.3
$10,001 TO $15,000	7.1	6.7	4.1	2.3
$15,001 TO $20,000	6.8	4.5	8.5	3.4
$20,001 TO $25,000	5.4	2.8	13.4	4.5
$25,001 TO $50,000	11.2	3.9	16.2	4.5
$50,001 TO $75,000	9.3	1.7	8.0	1.1
$75,001 TO $100,000	2.8	0.3	14.4	1.1
$100,001 TO $200,000	6.1	0.5	0.0	0.0
$200,001 TO $300,000	6.4	0.3	0.0	0.0
$300,001 TO $400,000	4.9	0.2	0.0	0.0
$400,001 TO $500,000	6.0	0.2	0.0	0.0
MORE THAN $500,000	11.9	0.2	0.0	0.0

Note: %$ means percentage of total dollars paid to claimants in each band
Note: % claimants means percentage of claimants in each band

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 25 - BREAKDOWN OF SETTLEMENT
CLOSED IN 1988

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS		568		74
NUMBER USEABLE		568		74
	PRIVATE PASSENGER		OTHER	
	% total $	% claimants	% total $	% claimants
LOSS OF EMPLOYMENT INCOME	13.3	34.0	8.7	33.8
OTHER INCOME LOSS	0.4	2.3	0.5	5.4
OUT OF POCKET	8.8	27.1	4.9	31.1
NON-PECUNIARY	61.1	91.0	41.9	90.5
FUTURE EMPLOYMENT INCOME	11.0	3.0	31.5	9.5
FUTURE CARE	0.6	1.4	0.0	0.0
GROSS-UP FOR TAX	0.0	0.5	0.0	0.0
FUND MANAGEMENT	0.0	0.0	0.0	0.0
PARTY AND PARTY COSTS	2.0	22.4	6.6	37.8
PREJUDGEMENT INTEREST	2.8	15.1	6.0	16.2

% total $ means percentage of total B.I. claim

QUESTION 25 - BREAKDOWN OF SETTLEMENT
CLOSED IN 1990

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS		609		88
NUMBER USEABLE		609		88
	PRIVATE PASSENGER		OTHER	
	% total $	% claimants	% total $	% claimants
LOSS OF EMPLOYMENT INCOME	14.0	31.0	11.8	20.5
OTHER INCOME LOSS	0.6	1.8	0.0	0.0
OUT OF POCKET	5.8	29.2	5.9	22.7
NON-PECUNIARY	50.1	92.0	68.4	93.2
FUTURE EMPLOYMENT INCOME	18.6	3.0	2.3	2.3
FUTURE CARE	3.3	1.8	0.4	2.3
GROSS-UP FOR TAX	0.8	0.3	0.0	0.0
FUND MANAGEMENT	0.2	0.3	0.0	0.0
PARTY AND PARTY COSTS	2.8	22.2	6.1	26.1
PREJUDGEMENT INTEREST	3.9	14.8	5.1	17.0

% total $ means percentage of total B.I. claim

QUESTION 26 - BREAKDOWN OF INTERNAL EXPENSES

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	284	307	49	56
NUMBER USEABLE	154	186	37	44
	PRIVATE PASSENGER		OTHER	
	% total $		% total $	
FEES PAID TO OUTSIDE LAWYER	7.2	8.6	6.1	13.1
FEES PAID TO INDEP. ADJUSTER	2.9	3.6	2.3	6.7
FEES PAID TO DEFENSE MEDICAL	0.6	0.5	0.1	1.1
FEES PAID TO OTHER EXPERTS	0.7	1.4	0.2	0.6
OTHER	0.4	0.2	0.4	0.0

% total $ means percentage of total B.I. claim

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 27 - FEES ALLOCATED TO IN-HOUSE LAWYER

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	12	9	1	0
	PRIVATE PASSENGER		OTHER	
	% total $		% total $	
FEES PAID TO IN-HOUSE LAWYER	0.5	0.3	0.0	0.0

% total $ means percentage of total B.I. claim

QUESTION 28 - SECTION B BENEFITS
CLOSED IN 1988

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS	568		74	
NUMBER USEABLE	44		10	
	PRIVATE PASSENGER		OTHER	
	% total $	% claimants	% total $	% claimant
MEDICAL	0.6	77.3	0.6	60.0
LONG TERM CARE	0.0	0.0	0.0	0.0
CHRIOPACTOR	0.0	9.1	0.0	0.0
REHABILITION	0.0	0.0	0.0	0.0
VOCATIONAL TRAINING	0.0	0.0	0.0	0.0
FUNERAL	0.2	15.9	0.1	40.0
DEATH-PRINCIPAL SUM	0.2	15.9	8.8	40.0
DEATH- SURVIVOR BENEFIT	0.2	9.1	0.0	10.0
DISABILITY- EMPLOYED	2.3	100.0	3.5	100.0
DISABILITY- SPOUSAL	0.0	0.0	0.0	0.0
OTHER	0.0	9.1	0.0	0.0

% total $ means percentage of total B.I. claim

QUESTION 28 CONTINUED
CLOSED IN 1990

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS	609		88	
NUMBER USEABLE	58		2	
	PRIVATE PASSENGER		OTHER	
	% total $	% claimants	% total $	% claimants
MEDICAL	0.7	74.1	0.0	0.0
LONG TERM CARE	0.0	0.0	0.0	0.0
CHRIOPACTOR	0.0	5.2	0.1	50.0
REHABILITION	0.0	1.7	0.0	0.0
VOCATIONAL TRAINING	0.0	0.0	0.0	0.0
FUNERAL	0.1	12.1	0.0	50.0
DEATH-PRINCIPAL SUM	0.2	6.9	0.0	50.0
DEATH- SURVIVOR BENEFIT	0.4	10.3	0.0	0.0
DISABILITY- EMPLOYED	3.2	100.0	0.2	100.0
DISABILITY- SPOUSAL	0.0	0.0	0.0	0.0
OTHER	0.2	12.1	0.0	50.0

% total $ means percentage of total B.I. claim

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 29 - THIRD PARTY VEHICLE DAMAGE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	401	389	47	60
	PRIVATE PASSENGER % accidents		OTHER % accidents	
LESS THAN $500	14.7	15.7	25.5	11.7
$501 TO $1,000	14.2	14.4	6.4	18.3
$1,001 TO $1,500	13.0	9.8	10.6	10.0
$1,501 TO $2,000	11.7	7.7	10.6	5.0
$2,001 TO $2,500	9.0	10.0	8.5	16.7
$2,501 TO $3,000	6.2	7.5	6.4	3.3
$3,001 TO 3,500	5.2	7.7	10.6	3.3
$3,501 TO $4,000	4.7	3.3	0.0	10.0
$4,001 TO $4,500	3.0	4.9	4.3	3.3
$4,501 TO $5,000	3.7	2.6	2.1	5.0
$5,001 TO $6,000	5.2	4.9	6.4	3.3
$6,001 TO $7,000	2.2	5.1	0.0	1.7
$7,001 TO $8,000	1.2	1.5	0.0	0.0
$8,001 TO $9,000	1.7	1.5	0.0	0.0
$9,001 TO $10,000	1.2	0.8	0.0	3.3
GREATER THAN $10,001	2.7	2.6	8.5	5.0

QUESTION 29 - OTHER PARTY VEHICLE DAMAGE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	56	56	4	9
	PRIVATE PASSENGER % accidents		OTHER % accidents	
LESS THAN $200	43.6	35.7	75.0	33.3
$201 TO $300	14.5	8.9	0.0	11.1
$301 TO $400	7.3	8.9	0.0	0.0
$401 TO $500	9.1	3.6	0.0	11.1
$501 TO $600	1.8	0.0	0.0	22.2
$601 TO $700	7.3	1.8	25.0	11.1
$701 TO 800	1.8	3.6	0.0	0.0
$801 TO $900	0.0	3.6	0.0	11.1
$901 TO $1,000	3.6	1.8	0.0	0.0
$1,001 TO $1,200	0.0	8.9	0.0	0.0
$1,201 TO $1,400	0.0	3.6	0.0	0.0
$1,401 TO $1,600	0.0	3.6	0.0	0.0
$1,601 TO $1,800	5.5	1.8	0.0	0.0
$1,801 TO $2,000	0.0	1.8	0.0	0.0
GREATER THAN $2,000	5.5	12.5	0.0	0.0

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 31 - GOVERNMENT PLAN - U.I.C. AVERAGE WEEKLY BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	2	2	0	0
AVERAGE SIZE	253	689	0	0

QUESTION 31 - GOVERNMENT PLAN - U.I.C. DURATION (WEEKS)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	2	2	0	0
AVERAGE DURATION	7	5	0	0

QUESTION 31 - GOVERNMENT PLAN - U.I.C. TOTAL BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	2	2	0	0
AVERAGE BENEFIT	1782	3350	0	0

QUESTION 32 - EMPLOYER SPONSORED PROGRAMS - WEEKLY BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	10	4	2	0
AVERAGE SIZE	450	567	252	0

QUESTION 32 - EMPLOYER SPONSORED PROGRAMS - AVERAGE DURATION (WEEKS)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	10	5	3	0
AVERAGE DURATION	7	4	60	0

QUESTION 32 - EMPLOYER SPONSORED PROGRAMS - TOTAL BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	11	7	3	0
AVERAGE BENEFIT	3253	3463	10216	0

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 33 - PERSONAL INSURANCE - WEEKLY BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	0	0	0	0
AVERAGE SIZE	0	0	0	0

QUESTION 33 - PERSONAL INSURANCE - AVERAGE DURATION (WEEKS)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	0	0	0	0
AVERAGE DURATION	0	0	0	0

QUESTION 33 - EMPLOYER SPONSORED PROGRAMS - TOTAL BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	0	1	0	0
TOTAL BENEFIT	0	617	0	0

QUESTION 34 - NUMBER OF INSUREDS RECEIVING ACCIDENT BENEFITS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	50	71	8	6
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
AVERAGE NUMBER	1.5	1.5	1.5	1.2

QUESTION 35 - TOTAL AMOUNT OF ACCIDENT BENEFITS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	44	56	9	4
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
LESS THAN $500	63.6	48.2	22.2	75.0
$501 TO $600	4.5	8.9	0.0	0.0
$601 TO $700	0.0	5.4	0.0	25.0
$701 TO $800	4.5	7.1	11.1	0.0
$801 TO $900	2.3	3.6	11.1	0.0
$901 TO $1000	6.8	1.8	11.1	0.0
$1001 TO 1100	0.0	0.0	0.0	0.0
$1101 TO $1200	0.0	0.0	0.0	0.0
$1201 TO $1300	0.0	3.6	0.0	0.0
$1301 TO $1400	4.5	0.0	0.0	0.0
$1401 TO $1500	0.0	1.8	0.0	0.0
MORE THAN $1500	13.6	19.6	44.4	0.0

BODILY INJURY CLAIMS SURVEY RESULTS

QUESTION 36 - AVERAGE WEEKLY BENEFIT OF 1ST INSURED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	17	24	0	1
AVERAGE WEEKLY BENEFIT	236	189	0	84

QUESTION 36 - AVERAGE WEEKLY BENEFIT OF 2ND INSURED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	5	1	0	0
AVERAGE WEEKLY BENEFIT	200	207	0	0

QUESTION 36 - AVERAGE WEEKLY BENEFIT OF 3RD INSURED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	2	1	0	0
AVERAGE WEEKLY BENEFIT	126	154	0	0

QUESTION 36 - AVERAGE WEEKLY BENEFIT OF 4TH INSURED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	0	0	0	0
AVERAGE WEEKLY BENEFIT	0	0	0	0

Note for question 36 - current maximum weekly benefit is $150

QUESTION 37 - ADDITIONAL INFORMATION

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	568	609	74	88
NUMBER USEABLE	568	609	74	88
	PRIVATE PASSENGER % claimants		OTHER % claimants	
REPRESENTED BY COUNSEL	49.6	50.1	60.8	51.1
ACTION COMMENCED	24.6	23.3	35.1	23.9
EXAMINATION FOR DISCOVERY	9.3	11.2	17.6	11.4
CASE PRE-TRIED	0.4	1.0	1.4	2.3
CASE TRIED BY JURY	0.2	0.2	0.0	0.0
CASE APPEALED	0.5	0.2	0.0	0.0
APPEALED BY PLANTIFF	0.4	0.2	0.0	0.0

QUESTION 41 - IBC STATISTICAL CODE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	464	473	66	71
NUMBER USEABLE	463	473	66	71
	PRIVATE PASSENGER % accidents		OTHER % accidents	
MED. HAT,RED DEER	30.8	30.9	30.3	25.4
CALGARY	33.0	32.8	37.9	40.8
EDMONTON	33.2	33.6	28.8	31.0
NORTHERN DISTRICT	2.8	2.7	3.0	2.8

Alberta
AUTOMOBILE INSURANCE
BOARD

19th Floor, 10025 Jasper Avenue, Edmonton, Alberta, Canada T5J 3Z5 403/427-5428

GENERAL INSTRUCTIONS

1. Indicate company number, your initials and claim number clearly for future reference.

2. This survey form is to be completed for each claimant. For example, if an accident gives rise to three claimants, three separate forms have to be completed.

3. All dollar figures are in whole dollars. Absolutely no cent should be shown.

4. All dollar figures which should balance to the answers of other questions will be checked.

5. All dates are in international convention. They are shown as year, month and day. Where necessary, you must use leading zeros; eg., you must code January 9, 1988 as 88 01 09.

6. Where a dollar amount is expected, a blank will imply 0.

7. Where a check mark "X" or a selection "a number" is expected, you MUST pick the most appropriate category. Otherwise, the diskette may be returned.

ALBERTA AUTOMOBILE INSURANCE BOARD

MOTOR VEHICLE ACCIDENT BENEFIT CLAIM SURVEY

---

[1] Company number |_|_|_|_|

[2] Your initials |_|_|_|_|

[3] Claim number |_|_|_|_|_|_|_|_|_|_|_|_|_|_|

[4] Claimant number |_|_|_|
(including claim without payment
but must have injury)

[5] Date of accident YY |1|9|_|_| MM |_|_| DD |_|_|

[6] Date claim was notified to your company YY |1|9|_|_| MM |_|_| DD |_|_|

[7] Coverage (check all which are applicable)

|_| accident benefits |_| uninsured motorist

[8] Place of accident (check one box) |_| Alberta

|_| other jurisdictions in Canada |_| U.S.A.

[9] Claimant category |_|

1: driver
2: passenger: spouse of driver
3: passenger: dependent child
4: passenger: other
5: pedestrian or cyclist
6: other

ALBERTA AUTOMOBILE INSURANCE BOARD

[10] Sex of claimant |_| 1: male 2: female

[11] Date of birth of claimant YY |1|9|_|_| MM |_|_| DD |_|_|
Use UN if information is not available.

[12] Accident type |_| 1: single vehicle 2: multiple vehicle

[13] Was the insured vehicle involved in the accident? |_| yes |_| no

[14] Type of vehicles involved in the accident:
|_| vehicle in which the claimant was an occupant or which struck pedestrian
|_| other vehicle involved (if applicable)

1:	car	2:	pick-up truck/van	3:	motorcycle
4:	bus	5:	snow vehicle	6:	ATV
7:	heavy truck (over 4 tonnes or 10,000 pounds)	8:	taxi	9:	other

[15] Degree of fault of the claimant (based on tort only):
If driver: |_|_|_|_| %
If a pedestrian or cyclist: |_|_|_|_| %
If other |_|_|_|0| %; you can override the zero only if you have evidence

[16] Degree of fault of the third party driver (if there is any)
|_|_|_|_| %, |_| no third party driver in the accident.

[17] Does the claimant who was an occupant of your insured vehicle have a B.I. liability claim against the third party's insurer or your company as a result of this accident?
|_| yes |_| no |_| unknown

ALBERTA AUTOMOBILE INSURANCE BOARD

[18] Does the third party (occupant of the other vehicle or pedestrian) have any B.I. liability claim against your company as a result of this accident?

|_| yes |_| no |_| no third party in the accident

[19] Date of settlement (final payment)

YY |1|9|_|_| MM |_|_| DD |_|_|

[20] Condition of claimant |_| 1: deceased 2: injured

If the answer is 1, then go to question 23.

[21] Is it likely that the injury will be of a permanent nature?

|_| No; |_| Yes; |_| Maybe

If the answer is yes or maybe, indicate in the next question which injury type prompts you to draw this conclusion.

[22] Type of injury (Check more than one if necessary)

INSTRUCTION: first check the part(s) of the body injured, then check the type(s) of injury corresponding to the part of the body. Also indicate whether the injury is of a permanent nature.

Part of Body	Injury of a Permanent Nature	Description of Injury
|_| 99 none	|_|	|_| nominal value (shaken up)
	|_|	|_| psychological trauma
|_| 0 brain or	|_|	|_| paraplegic or quadraplegic
spinal column	|_|	|_| other

[22] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
⌊⌋ 1 head	⌊⌋	⌊⌋ fracture
	⌊⌋	⌊⌋ concussion
⌊⌋ 2 face	⌊⌋	⌊⌋ fracture
	⌊⌋	⌊⌋ laceration with serious scar
	⌊⌋	⌊⌋ laceration - no scar
⌊⌋ 3 eye	⌊⌋	⌊⌋ partial loss or loss of use of 1 or 2 eyes
	⌊⌋	⌊⌋ total loss or loss of use of 1 or 2 eyes
⌊⌋ 4 ears	⌊⌋	⌊⌋ partial loss or loss of use of 1 or 2 ears
	⌊⌋	⌊⌋ total loss or loss of use of 1 or 2 ears
⌊⌋ 5 nose	⌊⌋	⌊⌋ resulting in disfigurement
	⌊⌋	⌊⌋ no disfigurement
⌊⌋ 6 teeth and jaw	⌊⌋	⌊⌋ fracture
	⌊⌋	⌊⌋ loss of teeth
	⌊⌋	⌊⌋ other

[22] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 7 voice and larynx	☐	☐ loss of voice
	☐	☐ other
☐ 8 neck	☐	☐ soft tissue
	☐	☐ vertebrae/disc fracture
	☐	☐ psychological trauma
☐ 9 back	☐	☐ soft tissue
	☐	☐ vertebrae/disc fracture
	☐	☐ psychological trauma
☐ 10 chest and ribs	☐	☐ fracture
	☐	☐ other
☐ 11 internal organs	☐	☐ surgery is required
	☐	☐ other

[22] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 12 shoulder	☐	☐ soft tissue
	☐	☐ fracture
	☐	☐ laceration
	☐	☐ other
☐ 13 arm and hand	☐	☐ fracture
	☐	☐ loss of arm or hand
	☐	☐ loss of both arms or hands
	☐	☐ laceration
	☐	☐ loss of fingers
	☐	☐ other
☐ 14 elbow	☐	☐ fracture
	☐	☐ other
☐ 15 wrist	☐	☐ fracture
	☐	☐ other

[22] Continued

Part of Body	Injury of a Permanent Nature	Description of Injury
☐ 16 pelvis and hip	☐	☐ fracture
	☐	☐ other
☐ 17 leg and foot	☐	☐ fracture
	☐	☐ loss of leg or foot
	☐	☐ laceration
	☐	☐ loss of both legs or feet
	☐	☐ other
☐ 18 knee	☐	☐ soft tissue
	☐	☐ fracture
	☐	☐ other
☐ 19 ankle ☐		☐ fracture
	☐	☐ other

ALBERTA AUTOMOBILE INSURANCE BOARD

[23] Employment status at time of accident of claimant |__|

1:	employed full-time	2:	employed part-time
3:	student (16 yrs. or older)	4:	retired
5:	unemployed	6:	homemaker
7:	preschooler/student under 16	8:	other

[24] Gross (weekly) employment income of claimant $ |__|__|__|__|

Number of months employed during the 12 months preceding the date of accident |__|__|

[25] Amount of actual time (including waiting period) loss of claimant:

|__|__|__| Yrs. |__|__|__| Wks. |__|__| Days including intermittent time off. Use your best estimate here, do not leave it blank.

|__|__| permanently disabled

[26] Payments to claimant:

Uninsured motorists - B.I. $ |__|__|__|__|__|__|

Uninsured motorists - P.D. $ |__|__|__|__|__|__|

[27]

Section B benefits	Payments	
medical	$ |__|__|__|__|__|__|__|	
long term care	$ |__|__|__|__|__|__|__|	
chiropractor	$ |__|__|__|__|__|__|__|	
rehabilitation	$ |__|__|__|__|__|__|__|	
vocational training	$ |__|__|__|__|__|__|__|	
funeral	$ |__|__|__|__|__|__|__|	
death - principal sum	$ |__|__|__|__|__|__|__|	
death - survivor benefit	$ |__|__|__|__|__|__|__|	|__|__|__|__| weekly benefit
disability - employed	$ |__|__|__|__|__|__|__|	|__|__|__|__| weekly benefit
disability - spousal	$ |__|__|__|__|__|__|__|	|__|__|__|__| weekly benefit
other	$ |__|__|__|__|__|__|__|	
Total	$ |__|__|__|__|__|__|__|	

ALBERTA AUTOMOBILE INSURANCE BOARD

[Type of collateral benefits available to the claimant.] For questions 28 to 30, try your best to fill in the amount.

[28] Government Program

U.I.C.

Weekly benefit $ |_|_|_|_|_| Duration |_|_|_|_|_| weeks

Total amount $ |_|_|_|_|_|_|

[29] Employer-sponsored salary continuance insurance programs (eg. long term disability)

Weekly benefit $ |_|_|_|_|_| Duration |_|_|_|_|_| weeks

Total amount $ |_|_|_|_|_|_|

[30] Personal insurance

Weekly benefit $ |_|_|_|_|_| Duration |_|_|_|_|_| weeks

Total amount $ |_|_|_|_|_|_|

[31] Breakdown of allocated claims expenses (exclude staff adjuster):

(a) Fees paid to outside lawyer $ |_|_|_|_|_|_|_|

(b) Fees paid to independent adjuster $ |_|_|_|_|_|_|_|

(c) Cost of medical $ |_|_|_|_|_|_|_|

(d) Cost of other experts $ |_|_|_|_|_|_|_|

(e) Other $ |_|_|_|_|_|_|_|

[32] Fees allocated to in-house lawyer $ |_|_|_|_|_|_|_|

ALBERTA AUTOMOBILE INSURANCE BOARD

[33] Additional information (check yes or no)

(a) Was claimant represented by counsel? Yes |_| No |_|

(b) Was action commenced? Yes |_| No |_|

[34] Date of receipt of the application for accident benefits (or proof of claim)

Disability Income Benefits YY |1|9|_|_| MM |_|_| DD |_|_|

Other Benefits YY |1|9|_|_| MM |_|_| DD |_|_|

[35] Date first cheque was issued:

Disability Income Benefits YY |1|9|_|_| MM |_|_| DD |_|_|

Other Benefits YY |1|9|_|_| MM |_|_| DD |_|_|

[36] IBC statistical territory code |1|0|_| of your insured vehicle.

[37] IBC class code (i.e., type of use code) |_|_| of your insured vehicle.

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 5 - YEAR OF ACCIDENT

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS	450	448	124	92
NUMBER USEABLE	450	448	124	92
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
DURING OR BEFORE 1984	1.3	0.2	2.4	1.1
DURING 1985	2.4	0.0	6.5	1.1
DURING 1986	18.7	0.9	18.5	0.0
DURING 1987	38.4	4.7	38.7	3.3
DURING 1988	39.1	20.1	33.9	20.7
DURING 1989	0.0	51.3	0.0	48.9
DURING 1990	0.0	22.8	0.0	25.0

QUESTION 6 - DAYS TILL CLAIM WAS REPORTED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
LESS THAN ONE WEEK	79.6	83.3	52.6	65.3
ONE WEEK	1.9	1.2	2.9	3.2
TWO WEEKS	5.8	4.8	14.6	11.6
THREE WEEKS	3.2	3.4	4.4	7.4
FOUR WEEKS	2.3	1.2	7.3	1.1
GREATER THAN FOUR WEEKS	7.2	6.0	18.2	11.6

QUESTION 7 - COVERAGES

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	450	448	125	92
NUMBER USEABLE	450	448	124	92
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
ACCIDENT BENEFITS	100.0	100.0	100.0	100.0
UNINSURED MOTORIST	0.0	0.0	0.8	0.0

QUESTION 8 - PLACE OF ACCIDENT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	450	448	124	92
NUMBER USEABLE	450	448	124	92
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
ALBERTA	94.4	95.8	90.3	97.8
OTHER JUR. IN CANADA	4.7	2.5	8.9	2.2
U.S.A.	0.9	1.8	0.8	0.0

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 9 - CLAIMANT CATEGORY

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
CLAIMANT CATEGORY	PRIVATE PASSENGER % claimants		OTHER % claimants	
DRIVER	64.9	72.1	74.5	82.1
PASSENGER (SPOUSE OF DRIVER)	7.0	7.0	4.4	1.1
PASSENGER (DEPENDENT CHILD)	3.2	3.2	1.5	2.1
PASSENGER OTHER	19.2	13.3	16.8	12.6
PED.OR CYCLIST	5.1	3.8	2.9	2.1
OTHER	0.6	0.6	0.0	0.0

QUESTION 10 - SEX OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
MALE	48.1	45.8	75.9	82.1
FEMALE	51.9	54.2	24.1	17.9

QUESTION 11 - AGE OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	460	462	125	85
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN 16 YRS	3.7	3.7	6.4	2.4
16 TO 24 YRS	13.7	20.1	17.6	23.5
25 TO 34 YRS	30.2	31.2	39.2	35.3
35 TO 44 YRS	24.1	21.6	20.0	15.3
45 TO 54 YRS	14.3	13.0	8.8	10.6
55 TO 64 YRS	7.8	5.6	2.4	2.4
MORE THAN 65 YRS	6.1	4.8	5.6	10.6

QUESTION 12 - ACCIDENT TYPE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	450	448	124	92
NUMBER USEABLE	450	448	124	92
	PRIVATE PASSENGER % accidents		OTHER % accidents	
SINGLE VEHICLE	26.7	21.2	37.1	41.3
MULTIPLE VEHICLE	73.3	78.8	62.9	58.7

QUESTION 13 INSURED VEHICLE INVOLVED IN ACCIDENT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	450	448	124	92
NUMBER USEABLE	450	448	124	92
	PRIVATE PASSENGER % accidents		OTHER % accidents	
INSURED VEHICLE INVOLVED	99.6	98.9	97.6	100.0

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 14 - TYPE OF VEHICLE INVOLVED - CLAIMANT AN OCCUPANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
CAR	73.4	80.7	29.2	14.7
PICK-UP TRUCK	21.1	16.5	24.8	32.6
MOTORCYCLE	2.6	1.4	32.8	35.8
BUS	0.0	0.0	0.0	2.1
SNOW VEHICLE	0.0	0.0	3.6	2.1
ATV	0.2	0.2	2.2	2.1
HEAVY TRUCK	0.8	0.6	5.8	9.5
TAXI	0.0	0.0	1.5	1.1
OTHER	1.9	0.6	0.0	0.0

QUESTION 14 - OTHER VEHICLE INVOLVED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	393	398	91	56
NUMBER USEABLE	393	398	91	56
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
CAR	71.0	67.3	78.0	73.2
PICK-UP TRUCK	23.2	25.9	18.7	19.6
MOTORCYCLE	0.3	0.5	1.1	0.0
BUS	0.0	0.5	0.0	1.8
SNOW VEHICLE	0.0	0.0	0.0	0.0
ATV	0.3	0.0	0.0	0.0
HEAVY TRUCK	3.8	4.0	1.1	5.4
TAXI	0.5	0.3	0.0	0.0
OTHER	1.0	1.5	1.1	0.0

QUESTION 15 - DEGREE OF FAULT OF DRIVER

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	450	448	124	92
NUMBER USEABLE	420	425	119	85
	PRIVATE PASSENGER		OTHER	
	% accidents		% accidents	
NONE	65.2	70.1	57.1	49.4
LESS THAN 100%	6.2	5.6	1.7	4.7
100%	28.6	24.2	41.2	45.9

QUESTION 15 - DEGREE OF FAULT OF PEDESTRIAN OR CYCLIST

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	475	461	126	86
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
NONE	96.2	99.1	99.2	100.0
LESS THAN 100%	1.1	0.4	0.0	0.0
100%	2.7	0.4	0.8	0.0

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 15 - DEGREE OF FAULT OF OTHER

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	469	460	126	86
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
NONE	98.7	98.7	98.4	98.8
LESS THAN 100%	0.4	0.2	0.0	0.0
100%	0.9	1.1	1.6	1.2

QUESTION 16 - DEGREE OF FAULT OF THIRD PARTY

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	509	494	134	94
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
NONE	38.5	30.4	44.0	52.1
LESS THAN 100%	3.9	2.6	3.0	4.3
100%	57.6	67.0	53.0	43.6

QUESTION 17 - CLAIMANT HAD A B.I. LIABILITY CLAIM

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
YES	30.4	32.7	28.5	29.5
NO	42.6	33.1	48.9	50.5
UNKNOWN	27.0	34.1	22.6	20.0

QUESTION 18 - THIRD PARTY HAD A B.I. LIABILITY CLAIM

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
YES	12.6	10.8	6.6	6.3
NO	70.4	81.7	74.5	67.4
UNKNOWN	17.0	7.4	19.0	26.3

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 19 - NUMBER OF MONTHS TILL CLAIM WAS CLOSED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN 1 MONTH	9.1	7.8	8.0	7.4
UP TO 2 MONTHS	10.2	6.6	11.7	11.6
UP TO 3 MONTHS	9.4	6.2	8.8	6.3
UP TO 4 MONTHS	8.5	8.8	6.6	7.4
5 TO 6 MONTHS	11.5	11.8	6.6	12.6
7 TO 8 MONTHS	5.7	7.4	8.8	10.5
9 TO 10 MONTHS	6.6	6.8	5.8	8.4
11 TO 12 MONTHS	4.3	5.2	3.6	4.2
UP TO 18 MONTHS	15.1	17.7	14.6	10.5
18 TO 24 MONTHS	8.1	10.2	10.2	11.6
24 TO 36 MONTHS	9.6	9.0	11.7	6.3
36 TO 48 MONTHS	1.3	2.0	2.2	1.1
48 TO 60 MONTHS	0.4	0.0	0.7	1.1
MORE THAN 60 MONTHS	0.2	0.2	0.7	1.1

QUESTION 20 - CONDITION OF CLAIMANT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
DECEASED	5.1	4.2	8.8	9.5
INJURED	94.9	95.8	91.2	90.5

QUESTION 21 - INJURY OF PERMANENT NATURE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
NO	89.2	88.2	81.8	83.2
YES	8.3	6.0	15.3	11.6
MAYBE	2.5	5.8	2.9	5.3

QUESTION 22 - TYPE OF INJURY

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
NONE				
NOMINAL VALUE (SHAKEN UP)	20.0	15.5	20.4	12.6
PSYCHOLOGICAL	0.6	0.6	0.0	1.1
BRAIN OR SPINAL COLUMN				
PARAPLEGIC OR QUADRAPLEGIC	0.2	0.0	1.5	1.1
OTHER	1.9	0.8	2.2	0.0
HEAD				
FRACTURE	1.7	1.0	2.2	2.1
CONCUSSION	6.6	7.2	3.6	10.5
FACE				
FRACTURE	0.9	0.6	0.0	1.1
LACERATION WITH SCAR	0.8	0.8	0.0	1.1
LACERATION NO SCAR	7.9	3.2	2.2	6.3

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 22 - TYPE OF INJURY continued

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
EYE				
PARTIAL LOSS OR LOSS OF USE	0.4	0.4	0.7	0.0
TOTAL LOSS OR LOSS OF USE OF	0.0	0.0	0.0	0.0
EARS				
PARTIAL LOSS OR LOSS OF USE	0.2	0.4	0.7	2.1
TOTAL LOSS OR LOSS OF USE OF	0.0	0.0	0.7	0.0
NOSE				
RESULTING IN DISFIGUREMENT	0.0	0.0	0.0	0.0
NO DISFIGUREMENT	1.3	0.6	0.7	2.1
TEETH AND JAW				
FRACTURE	2.1	1.4	1.5	5.3
LOSS OF TEETH	2.1	1.6	1.5	1.1
OTHER	3.8	5.2	1.5	0.0
VOICE AND LARYNX				
LOSS OF VOICE	0.2	0.0	0.0	0.0
OTHER	0.2	0.0	0.0	1.1
NECK				
SOFT TISSUE	40.8	51.2	19.0	17.9
VERTEBRAE\DISC FRACTURE	0.8	1.0	1.5	0.0
PSYCHOLOGICAL TRAUMA	1.1	2.6	0.0	1.1
BACK				
SOFT TISSUE	23.6	34.9	19.0	21.1
VERTEBRAE\DISC FRACTURE	2.1	0.8	5.8	1.1
PSYCHOLOGICAL TRAUMA	0.6	2.8	0.0	0.0
CHEST AND RIBS				
FRACTURE	3.2	1.8	3.6	6.3
OTHER	5.3	5.8	2.2	4.2
INTERNAL ORGANS				
SURGERY IS REQUIRED	0.6	0.6	0.0	1.1
OTHER	1.3	1.6	2.9	1.1
SHOULDER				
SOFT TISSUE	6.2	9.2	2.2	0.0
FRACTURE	0.9	1.0	2.9	5.3
LACERATION	0.2	0.2	0.0	2.1
OTHER	0.8	1.6	0.7	0.0
ARM AND HAND				
FRACTURE	2.3	1.2	3.6	5.3
LOSS OF ARM OR HAND	0.0	0.0	0.0	0.0
LOSS OF BOTH ARMS OR HANDS	0.0	0.0	0.0	0.0
LACERATION	0.8	0.8	2.9	1.1
LOSS OF FINGERS	0.0	0.0	0.0	0.0
OTHER	3.0	5.4	2.2	2.1
ELBOW				
FRACTURE	0.2	0.8	0.0	0.0
OTHER	0.6	1.0	0.7	1.1
WRIST				
FRACTURE	0.4	0.6	3.6	0.0
OTHER	0.9	0.6	0.7	0.0
PELVIS AND HIP				
FRACTURE	1.7	1.4	1.5	6.3
OTHER	1.7	1.4	1.5	3.2
LEG AND FOOT				
FRACTURE	3.8	2.2	5.8	7.4
LOSS OF LEG OR FOOT	0.4	0.0	0.7	1.1
LACERATION	1.3	0.6	0.7	3.2
LOSS OF BOTH LEGS OR FEET	0.0	0.0	0.0	0.0
OTHER	4.5	4.2	7.3	4.2
KNEE				
SOFT TISSUE	4.2	4.8	5.1	6.3
FRACTURE	0.9	0.2	0.7	0.0
OTHER	1.5	2.6	3.6	3.2
ANKLE				
FRACTURE	1.3	0.2	2.9	2.1
OTHER	1.3	1.0	1.5	3.2

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 23 - EMPLOYMENT STATUS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
EMPLOYED FULL-TIME	58.9	60.0	63.5	71.6
EMPLOYED PART-TIME	4.5	6.4	6.6	7.4
STUDENT - 16 AND OVER	5.8	5.4	4.4	3.2
RETIRED	4.2	3.6	0.7	0.0
UMEMPLOYED	6.8	5.6	3.6	3.2
HOMEMAKER	7.2	7.8	3.6	4.2
PRESCHOOLER	4.5	3.0	8.0	3.2
OTHER	8.1	8.0	9.5	7.4

QUESTION 24 - GROSS WEEKLY EMPLOYMENT INCOME

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	336	331	96	75
NUMBER USEABLE	210	200	61	52
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN $200	12.9	10.5	6.6	5.8
$201 TO $300	26.7	23.5	11.5	11.5
$301 TO $400	19.0	18.0	23.0	15.4
$401 TO $500	18.1	22.0	24.6	21.2
$501 TO $600	11.9	10.0	16.4	19.2
$601 TO $700	5.7	8.5	0.0	9.6
$701 TO 800	1.9	4.0	8.2	9.6
$801 TO $900	1.9	2.0	6.6	7.7
$901 TO $1000	1.9	1.0	1.6	0.0
MORE THAN $1000	0.0	0.5	1.6	0.0
AVERAGE $	396.7	418.6	485.6	509.8

QUESTION 24 - NUMBER OF MONTHS EMPLOYED PRECEDING ACCIDENT

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS	336	331	96	75
NUMBER USEABLE	278	277	75	57
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN 2 MONTHS	1.4	3.6	4.0	0.0
3 MONTHS	1.1	2.2	1.3	1.8
4 MONTHS	0.7	3.2	1.3	0.0
5 MONTHS	1.8	0.0	1.3	0.0
6 MONTHS	2.9	5.4	1.3	3.5
7 MONTHS	0.7	0.0	0.0	0.0
8 MONTHS	1.1	3.2	0.0	0.0
9 MONTHS	2.9	1.1	1.3	3.5
10 MONTHS	1.4	0.4	2.7	0.0
11 MONTHS	0.4	0.7	1.3	0.0
12 MONTHS	85.6	80.1	85.3	91.2

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS
ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 25 - ACTUAL TIME LOSS

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	270	268	82	60
	PRIVATE PASSENGER		OTHER	
	% claimants		% claimants	
1 WEEK	20.7	23.9	18.3	8.3
2 WEEKS	13.0	10.8	6.1	11.7
3 WEEKS	11.9	9.3	7.3	23.3
4 WEEKS	3.0	3.4	1.2	5.0
2 MONTHS	19.6	21.6	19.5	28.3
3 MONTHS	10.4	8.6	14.6	5.0
4 MONTHS	7.0	8.6	11.0	1.7
5 MONTHS	3.7	3.4	3.7	1.7
6 MONTHS	2.2	3.0	12.2	3.3
7 MONTHS	1.1	1.5	1.2	1.7
8 MONTHS	0.4	1.5	0.0	1.7
9 MONTHS	1.5	0.7	2.4	0.0
10 MONTHS	0.7	0.7	0.0	0.0
11 MONTHS	0.4	0.0	0.0	1.7
12 MONTHS	0.4	0.0	0.0	0.0
2 YEARS	0.4	0.4	0.0	0.0
3 YEARS	0.0	0.0	0.0	0.0
4 YEARS	0.0	0.0	0.0	0.0
5 YEARS	0.0	0.0	0.0	0.0
PERMANENT	3.7	2.6	2.4	6.7

QUESTION 26 - PAYMENTS MADE TO CLAIMANTS FOR UNINSURED MOTORISTS - B.I.

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	0	1	3	0
AVERAGE AMT	0	11136	79655	0

QUESTION 26 - PAYMENTS MADE TO CLAIMANTS FOR UNINSURED MOTORISTS - P.D.

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	1	0	0	0
	PRIVATE PASSENGER		OTHER	
AVERAGE AMT	43466	0	0	0

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 27 - TOTAL SECTION B BENEFITS PAYMENT
CLOSED IN 1988

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS	530		137	
NUMBER USEABLE	530		137	
	PRIVATE PASSENGER		OTHER	
	%$	% claimants	%$	% claimants
LESS THAN $1,000	11.1	65.5	4.4	48.2
$1,001 TO $2,000	10.6	13.2	7.3	16.1
$2,001 TO $3,000	9.2	6.4	3.7	5.1
$3,001 TO $4,000	4.8	2.5	5.3	5.1
$4,001 TO $5,000	7.4	2.8	2.8	2.2
$5,001 TO $6,000	6.5	2.1	6.2	3.6
$6,001 TO $7,000	5.5	1.5	5.7	2.9
$7,001 TO $8,000	1.7	0.4	1.7	0.7
$8,001 TO $9,000	1.8	0.4	3.7	1.5
$9,001 TO $10,000	2.0	0.4	2.0	0.7
$10,001 TO $15,000	22.4	3.2	30.7	8.8
$15,001 TO $20,000	14.9	1.5	26.6	5.1
$20,001 TO $25,000	2.2	0.2	0.0	0.0
$25,001 TO $50,000	0.0	0.0	0.0	0.0
$50,001 TO $75,000	0.0	0.0	0.0	0.0
$75,001 TO $100,000	0.0	0.0	0.0	0.0
$100,001 TO $200,000	0.0	0.0	0.0	0.0
$200,001 TO $300,000	0.0	0.0	0.0	0.0
$300,001 TO $400,000	0.0	0.0	0.0	0.0
$400,001 TO $500,000	0.0	0.0	0.0	0.0
MORE THAN $500,000	0.0	0.0	0.0	0.0

Note: %$ means percentage of total paid to claimants in each band
Note: %claimants means percentage of claimants in each band

QUESTION 27 - SECTION B BENEFITS
CLOSED IN 1988

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS	530		137	
NUMBER USEABLE	530		137	
	PRIVATE PASSENGER		OTHER	
	% total $	% claimants	% total $	% claimants
MEDICAL	25.8	81.1	13.9	80.3
LONG TERM CARE	0.0	0.0	0.0	0.0
CHRIOPACTOR	1.3	3.4	0.2	2.2
REHABILITION	0.6	2.5	0.0	2.2
VOCATIONAL TRAINING	0.0	0.0	0.0	0.0
FUNERAL	2.6	5.1	2.4	8.8
DEATH-PRINCIPAL SUM	8.7	4.3	12.7	8.8
DEATH- SURVIVOR BENEFIT	7.6	4.5	12.7	8.8
DISABILITY- EMPLOYED	52.6	34.7	55.2	46.7
DISABILITY- SPOUSAL	0.2	0.8	0.1	0.7
OTHER	0.5	5.5	2.7	3.6

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 27 - SECTION B BENEFIT - CLOSED IN 1988

	PRIVATE PASSENGER	OTHER
NUMBER OF RECORDS	530	137
NUMBER USEABLE	530	137
	PRIVATE PASSENGER AVERAGE AMT	OTHER AVERAGE AMT
MEDICAL	557	578
LONG TERM CARE	0	0
CHRIOPACTOR	647	296
REHABILITION	447	58
VOCATIONAL TRAINING	0	0
FUNERAL	909	917
DEATH-PRINCIPAL SUM	3509	4840
DEATH- SURVIVOR BENEFIT	2949	4833
DISABILITY- EMPLOYED	2652	3948
DISABILITY- SPOUSAL	530	650
OTHER	169	2487

QUESTION 27 - TOTAL SECTION B BENEFITS PAYMENT
CLOSED IN 1990

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS	498		95	
NUMBER USEABLE	498		95	
	PRIVATE PASSENGER %$	% claimants	OTHER %$	% claimants
LESS THAN $1,000	9.7	63.7	10.8	58.9
$1,001 TO $2,000	10.7	14.3	11.1	16.8
$2,001 TO $3,000	8.4	6.6	12.6	11.6
$3,001 TO $4,000	9.0	4.8	0.0	0.0
$4,001 TO $5,000	6.2	2.6	0.0	0.0
$5,001 TO $6,000	4.3	1.4	5.4	2.1
$6,001 TO $7,000	2.8	0.8	3.3	1.1
$7,001 TO $8,000	1.6	0.4	0.0	0.0
$8,001 TO $9,000	2.7	0.6	0.0	0.0
$9,001 TO $10,000	5.1	1.0	4.7	1.1
$10,001 TO $15,000	12.2	2.0	32.5	6.3
$15,001 TO $20,000	9.2	1.0	0.0	0.0
$20,001 TO $25,000	2.2	0.2	19.6	2.1
$25,001 TO $50,000	2.7	0.2	0.0	0.0
$50,001 TO $75,000	13.3	0.4	0.0	0.0
$75,001 TO $100,000	0.0	0.0	0.0	0.0
$100,001 TO $200,000	0.0	0.0	0.0	0.0
$200,001 TO $300,000	0.0	0.0	0.0	0.0
$300,001 TO $400,000	0.0	0.0	0.0	0.0
$400,001 TO $500,000	0.0	0.0	0.0	0.0
MORE THAN $500,000	0.0	0.0	0.0	0.0

QUESTION 27 CONTINUED - CLOSED IN 1990

	PRIVATE PASSENGER		OTHER	
NUMBER OF RECORDS	498		95	
NUMBER USEABLE	498		95	
	PRIVATE PASSENGER % total $	% claimants	OTHER % total $	% claimants
MEDICAL	35.3	74.7	18.0	75.8
LONG TERM CARE	0.5	0.4	1.3	3.2
CHRIOPACTOR	1.8	9.2	1.1	9.5
REHABILITION	1.3	4.0	0.0	0.0
VOCATIONAL TRAINING	0.0	0.0	0.2	1.1
FUNERAL	2.7	4.2	4.3	9.5
DEATH-PRINCIPAL SUM	8.4	3.2	11.9	7.4
DEATH- SURVIVOR BENEFIT	7.2	3.2	15.7	8.4
DISABILITY- EMPLOYED	40.0	32.3	46.4	44.2
DISABILITY- SPOUSAL	0.7	1.4	0.5	1.1
OTHER	2.1	9.8	0.8	5.3

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 27 - SECTION B BENEFITS
CLOSED IN 1990

	PRIVATE PASSENGER	OTHER
NUMBER OF RECORDS	498	95
NUMBER USEABLE	498	95
	PRIVATE PASSENGER AVERAGE AMT	OTHER AVERAGE AMT
MEDICAL	895	525
LONG TERM CARE	2246	885
CHRIOPACTOR	373	246
REHABILITION	634	0
VOCATIONAL TRAINING	0	395
FUNERAL	1223	1000
DEATH-PRINCIPAL SUM	4938	3572
DEATH- SURVIVOR BENEFIT	4229	4125
DISABILITY- EMPLOYED	2348	2325
DISABILITY- SPOUSAL	994	1050
OTHER	401	325

QUESTION 28 - GOVERNMENT PLAN - U.I.C. - WEEKLY BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	5	3	1	1
AVERAGE SIZE	213.2	202.3	265.0	318.0

QUESTION 28 - GOVERNMENT PLAN - U.I.C. - DURATION (WEEKS)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	6	3	1	1
AVERAGE DURATION	10.2	20.7	1.0	15.0

QUESTION 28 - GOVERNMENT PLAN - U.I.C. - TOTAL BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	6	3	1	1
AVERAGE BENEFIT	2296.8	4259.0	265.0	4770.0

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 29 - EMPLOYER SPONSORED - WEEKLY BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	33	26	7	6
AVERAGE SIZE	381.1	353.7	417.4	1045.0

QUESTION 29 - EMPLOYER SPONSORED - DURATION (WEEKS)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	33	27	7	6
AVERAGE DURATION	17.6	14.8	15.0	16.3

QUESTION 29 - EMPLOYER SPONSORED - TOTAL BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	33	27	7	6
AVERAGE BENEFIT	5846.1	5991.0	5297.1	10394.5

QUESTION 30 - PERSONAL INSURANCE - WEEKLY BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	6	0	1	1
AVERAGE SIZE	279.5	0.0	538.0	320.0

QUESTION 30 - PERSONAL INSURANCE - DURATION (WEEKS)

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	6	0	1	1
AVERAGE DURATION	14.0	0.0	1.0	5.0

QUESTION 30 - PERSONAL INSURANCE - TOTAL BENEFIT

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	7	0	1	1
AVERAGE BENEFIT	5897.6	0.0	538.0	1570.0

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 31 - BREAKDOWN OF INTERNAL EXPENSES

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	141	119	141	29
	PRIVATE PASSENGER AVG. SIZE		OTHER AVG. SIZE	
FEES PAID TO OUTSIDE LAWYER	1260	5562	1171	2714
FEES PAID TO INDEP. ADJUSTER	672	643	745	598
FEES PAID TO DEFENSE MEDICAL	385	444	35	261
FEES PAID TO OTHER EXPERTS	668	469	733	525
OTHER	71	202	5	0

QUESTION 32 - FEES ALLOCATED TO IN-HOUSE LAWYER

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	2	2	3	1
	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
AVERAGE AMOUNT	1762	1344	5699	1020

QUESTION 33 - ADDITIONAL INFORMATION

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
REPRESENTED BY COUNSEL	19.1	23.1	19.0	17.9
ACTION COMMENCED	3.2	6.0	7.3	3.2

QUESTION 34 - DAYS TILL APPLICATION FOR ACCIDENT BENEFITS RECEIVED

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN ONE WEEK	18.7	16.5	13.9	17.9
ONE WEEK	0.8	1.4	2.2	1.1
TWO WEEKS	6.6	8.2	2.9	7.4
THREE WEEKS	8.3	8.8	8.8	10.5
FOUR WEEKS	7.2	6.2	7.3	8.4
TWO MONTHS	20.9	21.5	25.5	22.1
THREE MONTHS	11.3	9.2	16.1	10.5
FOUR MONTHS	8.5	7.0	6.6	7.4
FIVE MONTHS	2.8	5.4	5.1	1.1
SIX MONTHS	2.5	3.2	1.5	1.1
GREATER THAN SIX MONTHS	12.5	12.4	10.2	12.6

ACCIDENT BENEFITS CLAIMS SURVEY RESULTS

QUESTION 35 - DAYS TILL FIRST CHEQUE WAS ISSUED FROM APPLICATION DATE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN ONE WEEK	53.2	50.2	43.1	47.4
ONE WEEK	1.7	1.0	1.5	2.1
TWO WEEKS	5.3	5.2	5.8	8.4
THREE WEEKS	7.4	9.2	6.6	5.3
FOUR WEEKS	3.6	6.6	8.8	3.2
TWO MONTHS	16.6	11.2	11.7	20.0
THREE MONTHS	4.2	4.2	8.0	6.3
FOUR MONTHS	1.7	3.4	3.6	2.1
FIVE MONTHS	0.8	2.4	1.5	1.1
SIX MONTHS	0.6	1.8	0.7	0.0
GREATER THAN SIX MONTHS	5.1	4.6	8.8	4.2

QUESTION 35 - DAYS TILL FIRST CHEQUE WAS ISSUED FROM ACCIDENT DATE

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	530	498	137	95
NUMBER USEABLE	530	498	137	95
	PRIVATE PASSENGER % claimants		OTHER % claimants	
LESS THAN ONE WEEK	6.0	5.2	4.4	6.3
ONE WEEK	0.4	1.4	0.0	1.1
TWO WEEKS	2.1	3.2	0.7	1.1
THREE WEEKS	5.7	5.8	1.5	7.4
FOUR WEEKS	5.7	5.8	6.6	5.3
TWO MONTHS	27.4	25.3	26.3	29.5
THREE MONTHS	15.3	14.3	16.8	13.7
FOUR MONTHS	10.6	7.2	13.1	12.6
FIVE MONTHS	5.7	8.2	6.6	4.2
SIX MONTHS	3.8	4.0	4.4	3.2
GREATER THAN SIX MONTHS	17.5	19.5	19.7	15.8

QUESTION 36 - IBC STATISTICAL TERRITORY

	PRIVATE PASSENGER		OTHER	
	1988	1990	1988	1990
NUMBER OF RECORDS	450	448	124	92
NUMBER USEABLE	448	448	124	92
	PRIVATE PASSENGER % accidents		OTHER % accidents	
MED. HAT,RED DEER	30.0	35.9	34.7	34.8
CALGARY	30.2	29.5	25.8	25.0
EDMONTON	35.6	32.1	38.7	34.8
NORTHERN DISTRICT	3.8	2.5	0.8	5.4

APPENDIX 3

CONFIDENTIAL

REPORT ON COSTING OF COMPENSATION SCHEME ALTERNATIVES FOR ALBERTA

Prepared by:

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27 August 1991

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INTRODUCTION

We were retained by the Alberta Automobile Insurance Board to examine potential reduction in cost of the following compensation scheme alternatives.

Under the first alternative (Option 1), all injured persons retain the right to sue; however, there is a $10,000 deductible on all non-pecuniary damage awards (ceiling increased to $300,000). Accident benefits are modestly enriched. Total disability benefits (income replacement) are prorated whenever the total benefits under all contracts exceed the normal income.

Under the second alternative, all injured persons retain the right to sue; however, there is a $10,000 deductible on all non-pecuniary damage awards (ceiling increased to $300,000). Accident benefits are substantially enriched. Total disability benefits (income replacement) are costed both primary (Option 2p) and secondary (Option 2s) to other sources.

Under the third alternative, recovery through tort (the right to sue) is limited to those cases where the level of bodily injury/impairment exceeds a defined threshold. Accident benefits are substantially enriched. Total disability benefits (income replacement) are costed both primary (Option 3p) and secondary (Option 3s) to other sources.

In determining the cost of the compensation scheme alternatives (five options in total), we were asked to calculate the loss cost (per vehicle) for the following enriched accident benefits (no-fault benefits) and tort reform measures.

I. Accident Benefits

1. Medical

Option 1:

Reasonable and essential expenses, excess of Alberta Health Care Insurance, up to $25,000 per person within 2 years.

Options 2p, 2s, 3p, & 3s:

Coverage up to a maximum of $500,000 would be available for medical and rehabilitation benefits over the greater of 10 years or 20 years less the age of the victim at the time of the accident. Long term care up to a maximum of $500,000 over the life of the victim.

2. Death Benefits

Option 1:

Principal Sum Age of Deceased at Date of Accident	Head of Household	Spouse in Two-Parent Household	Dependent Relative
Up to age of 4 years	---	---	2,000
5 to 9 years	---	---	2,000
10 to 17 years	10,000	10,000	2,000
18 to 64 years	10,000	10,000	2,000
65 to 69 years	10,000	10,000	2,000
70 years and over	10,000	10,000	2,000

In addition, with respect to the death of head of household,

a. Where there are two or more survivors, being spouse and/or dependent relatives, the principal sum payable is increased by 10% for each survivor other than the first; and

b. Where there are one or more survivors, being spouse and/or dependent relatives, 1% of the total principal sum payable each week for a period of 104 weeks. Any weekly benefit shall terminate upon death of all such survivors.

Options 2 & 3:

(a) The death of the head of household or spouse results in a payment of $25,000 plus an additional sum of $10,000 for each other survivor.

(b) The death of a dependent results in a payment of $10,000.

3. Funeral Expense

Options 1, 2p, 2s, 3p, & 3s:

Up to $3,000 per claimant fatally injured in accident.

4.A Disability Benefit -- wage earners and deemed to be employed.

Option 1:

75% of average gross weekly earnings subject to a maximum benefit of $500 payable for a maximum of 104 weeks. There is 7 day waiting period. The benefit payable is reduced where other benefits for loss of time are payable. The insurer is liable only for that proportion of benefits for loss of time that the money value of the time of the person insured bears to the aggregate of the benefits for loss of time payable under all such contracts.

Options 2p & 3p:

75% of average gross weekly earnings subject to a maximum benefit of $500 payable for life. There is 7 day waiting period for employed claimants and a 60 day waiting period for deemed to be employed claimants. The benefits payable are primary to other sources of income replacement.

Options 2s & 3s:

75% of average gross weekly earnings subject to a maximum benefit of $500 payable for life. There is 7 day waiting period for employed claimants and a 60 day waiting period for deemed to be employed claimants. The benefits payable are secondary to other sources of income replacement (except UIC).

4.B Disability Benefit -- students.

Option 1:

None.

Options 2p, 2s, 3p & 3s:

(a) Until deemed eligible to enter the work force, a lump sum yearly payment of:

(i) $1,000 per year lost at the elementary school level

(ii) $2,000 per year lost at the secondary school level

(iii) $4,000 per year lost at the post-secondary school level.

(b) A student with a lengthy disability will be eligible to receive a weekly benefit if, at the time of the accident:

(i) he is attending elementary school and attaining age nineteen (19) while still disabled

(ii) he is attending secondary school and attaining age nineteen (19) while still disabled

(iii) he is attending a post-secondary institution and attaining age twenty-three (23) while still disabled

at which time he/she will receive a weekly benefit of $340 per week.

4.C Disability Benefit -- home care.

Option 1:

A weekly benefit of $70 per week for not more than 26 weeks if completely incapacitated and unable to perform any of his/her duties.

Options 2p, 2s, 3p, & 3s:

A weekly benefit payable on the basis of reasonable expenses incurred up to a maximum of $50 per week of disability.

4.D Disability Benefit -- childcare:

Option 1:

None.

Options 2p, 2s, 3p, & 3s:

A weekly benefit of $200 plus an additional $50 per week per child/dependent, subject to a maximum of $350 per week, would be payable for child care expenses when the person normally providing the child care was disabled.

5. Other.

6. Uninsured motorist coverage.

II. 1. Tort Reforms

Options 1, 2p, & 2s:

$10,000 deductible on all non-pecuniary damage awards and increase ceiling to $300,000.

Options 3p & 3s:

Tort litigation beyond no-fault benefits subject to threshold

(a) death, or
(b) permanent serious disfigurement; or
(c) permanent serious impairment of an important bodily function, caused by continuing injury which is physical in nature.

2. Property Damage and SEF44

III. Reduction in Liability Claims Cost as an offset to Accident Benefit Enhancements.

SUMMARY

The objective of this report is to determine the relative costs of the various compensation schemes proposed and the potential reduction in cost (over the current system) associated with each.

We have examined the various compensation schemes proposed. All alternatives have higher first party benefits than the current accident benefits. Some of the options require some restriction of tort right (via a verbal threshold) while the rest impose a deductible on all non-pecuniary damage awards.

We concluded that the reduction in claims cost of the compulsory coverage (plus SEF 44) are as follows:

	Reduction @7/90 per Vehicle $
Option 1	32
Option 2p (primary)	24
Option 2s (secondary)	27
Option 3p (primary)	65
Option 3s (secondary)	72

	Reduction @1/92 per Vehicle $
Option 1	37
Option 2p (primary)	29
Option 2s (secondary)	32
Option 3p (primary)	77
Option 3s (secondary)	85

LIMITATIONS

Future claim costs may vary significantly from our estimates due to the change in the delivery mechanism or different utilization rate.

While we have tried to verify all our assumptions, it is not always possible. In certain cases, we have to rely on our best judgment.

Not all of our assumptions should be considered equally reliable. With respect to tort reform, we have assumed that the $10,000 non-pecuniary loss deductible and increased ceiling (to $300,000) will result in a 20% exaggeration of claim amount (before deductible). This may or may not be true. We have assumed that all severely injured persons would consume the policy limit on future care expense under certain options. This is probably not true.

We have employed detailed claimant data from the Alberta Claims survey. We believe it is the best information available. However, there is always some sampling error when one uses a small percentage of the population.

METHODOLOGY

Our methodology assumes that the 1990 discounted loss cost is representative of the current cost if no change in the policy is made. Total current accident benefits cost is allocated to each benefit based on the distribution found in the Accident Benefits Claims Survey. Each model is costed based on the proposed changes in accident benefits and tort reform measures.

Whenever possible, each claimant in the Alberta Claims Survey is subjected to a policy change and the aggregate result of all claimants in the sample is compared against the actual figure to arrive at a percentage of actual. This percentage (of actual) is applied to the 1990 discounted loss cost to arrive at the cost of the proposed benefit. Whenever possible, change in average claim size and change in frequency are estimated separately.

When it is not practical to analyze each claimant individually, total industry data is used.

The details of each proposed change in accident benefits and tort reform measures can be found in the appendix.

DATA AND RELIANCE

We have performed our analysis relying on the following data.

1) Alberta Bodily Injury Claims Survey Database.

2) Alberta Accident Benefits Claims Survey Database.

3) Report of Inquiry in Motor Vehicle Accident Compensation in Ontario; Hon. Mr. Justice Coulter A. Osborne.

4) 1983-1985 IBC data.

5) IBC Submission to the Inquiry into Motor Vehicle Accident Compensation in Ontario (the Osborne Commission).

6) 1969-1975 CIA Mortality Table.

7) Alberta Traffic Collision Statistics 1989

8) Letter to Ms. Susan Steeves from IBC re: lost cost per car 1983 to 1990

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B. Comparison of Discounted Loss Costs for each Compensation Scheme

C. Detailed Analysis by Section:

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2. Death benefit

3. Funeral expense

4. Disability benefit

A wage earners and deemed to be employed

B students

C house care

D child care

5. Other

6. Uninsured motorist coverage

II 1. Residual Bodily Injury Liability Loss Costs

2. Property Damage and SEF 44

III Reduction in Liability as an Offset to Accident Benefits Enhancements

APPENDIX A

DERIVATION OF CURRENT LOSS COST

Derivation of Current Loss Cost by Head of Damage

Based on 1990, accident year industry data, we have:

Coverage	Loss Cost
Bodily Injury	189.43
Property Damage	87.99
Accident Benefits (excl. U.M.)	13.98
Uninsured Motorists (U.M.)	1.00
SEF 44	5.60
Total	298.00

Based on the last eight years of industry data, we fitted the loss cost by year exponentially. We concluded the annual trend in loss cost by coverage is as follows:

Coverage	Annual Trend
Bodily Injury	11.0%
Property Damage	5.0%
Accident Benefits	9.0%
Uninsured Motorists	11.0% *
SEF 44	11.0% *

* assumed to be same as Bodily Injury.

Based on the Alberta Accident Benefits Claims Survey database, we found:

Accident Benefit	% of Cost	Disability Benefit	% of Cost
Medical	38.9%	Wage Earner	86.0%
Death	15.6%	Deemed Employed	4.1%
Funeral	2.7%	Student	nil
Disability	40.7%	Housecare	9.9%
Other	2.1%	Childcare	nil
Total	100%	Total	100%

Benefit		Discount Factor
Medical		.7794[1]
Funeral		.9343[2]
Death		.9343[2]
Disability -	Wage Earner	.7794[1]
	Deemed Employed	.7794[1]
	Student	.7794[1]
	Housecare	.7794[1]
	Childcare	.7794[1]
Other		.7794[1]
Total No-Fault		n/a
Uninsured Motorist -	B.I.	.7739[2]
	P.D.	n/a
Total Accident Benefits		.8055[2]
Bodily Injury (excluding expense)		.7739[2]
B.I. Claim Adjustment Expense		.7739[2]
Offset from Higher A.B.		n/a
Total Bodily Injury		.7739[2]
Property Damage		1.000
SEF 44		.7739[2]
Total Complusory Section		n/a

[1] Computed to balance.
[2] Based on IBC submission to the Osborne Commission.

Thus, in aggregate, we have:

Derivation of Current Discounted Loss Costs @7/90

Benefit		(a) Current Cost @7/90	(b) Discount Factor	(c) Current Cost @7/90	
Medical		5.44[1]	.7794	4.24	
Funeral			0.38[2]	.9343	0.36
Death		2.18[3]	.9343	2.04	
Disability -	Wage Earner	4.89[4]	.7794	3.81	
	Deemed Employed	0.23[5]	.7794	0.18	
	Student	nil	.7794	nil	
	Housecare	0.57[6]	.7794	0.44	
	Childcare	nil	.7794	nil	
Other		0.29[7]	.7794	0.23	
Total No-Fault		13.98	n/a	11.30	
Uninsured Motorist	- B.I.	1.00	.7739	0.77	
	- P.D.	nil	n/a	nil	
Total Accident Benefits			14.98	.8055	12.07
Bodily Injury (excluding expense)		164.80[8]	.7739	127.54	
B.I. Claim Adjustment Expense		24.63[9]	.7739	19.06	
Offset from Higher A.B.		n/a	n/a	n/a	
Total Bodily Injury		189.43	.7739	146.60	
Property Damage		87.99	1.0000	87.99	
SEF 44		5.60	.7739	4.33	
Total Complusory Section (plus SEF 44)		298.00	n/a	250.99	

[1] $5.44 = 38.9% x $13.98
[2] $0.38 = 2.7% x $13.98
[3] $2.18 = 15.6% x $13.98
[4] $4.89 = 40.7% x 86.0% x $13.98
[5] $0.23 = 40.7% x 4.1% x 13.98
[6] $0.57 = 40.7% x 9.9% x $13.98
[7] $0.29 = 2.1% x $13.98
[8] $164.80 = 87% x $189.43
[9] $24.63 = 13% x $189.43

Derivation of Current Discounted Loss Costs @1/92

Benefit		Discounted Cost @7/90	Trend Factor	Discounted Cost @1/92	
Medical		4.24	1.1380	4.83	
Funeral		0.36	1.1380	0.41	
Death		2.04	1.1380	2.32	
Disability -	Wage Earner	3.81	1.1380	4.34	
	Deemed Employed	0.18	1.1380	0.20	
	Student	nil	1.1380	nil	
	Housecare	0.44	1.1380	0.50	
	Childcare	nil	1.1380	nil	
Other		0.23	1.1380	0.26	
Total No-Fault		11.30	n/a	12.86	
Uninsured Motorist	- B.I.	0.77	1.1380	0.88	
	- P.D.	nil	nil	nil	
Total Accident Benefits			12.07	1.1380	13.74
Bodily Injury (excluding expense)		127.54	1.1695	149.15	
B.I. Claim Adjustment Expense		19.06	1.1695	22.29	
Offset from Higher A.B.		n/a	n/a	n/a	
Total Bodily Injury		146.60	1.1695	171.44	
Property Damage		87.99	1.0759	94.67	
SEF 44		4.33	1.1695	5.06	
Total Complusory Section (plus SEF 44)		250.99	n/a	284.91	

APPENDIX B

COMPARISON OF DISCOUNTED LOSS COSTS

FOR EACH COMPENSATION SCHEME

Comparison of Discounted Loss Costs --- Option 1

Benefit		Current Policy @7/90	Proposed Policy @7/90	Current Policy @1/92	Proposed Policy @1/92
Medical		4.24	6.36	4.83	7.24
Funeral			0.36	1.08	0.411.23
Death		2.04	3.80	2.32	4.32
Disability -	Wage Earner	3.81	8.45	4.34	9.62
	Deemed Employed	0.18	0.40	0.20	0.46
	Student	nil	nil	nil	nil
	Housecare	0.44	0.61	0.50	0.69
	Childcare	nil	nil	nil	nil
Other		0.23	0.23	0.26	0.26
Total No-Fault		11.30	20.93	12.86	23.82
Uninsured Motorist	- B.I.	0.77	0.56	0.88	0.64
	- P.D.	nil	nil	nil	nil
Total Accident Benefits			12.07	21.49	13.7424.46
Bodily Injury (excluding expense)		127.54	93.21	149.15	109.01
B.I. Claim Adjustment Expense		19.06	19.06	22.29	22.29
Offset from Higher A.B.		n/a	(6.59)	n/a	(7.50)
Total Bodily Injury		146.60	105.68	171.44	123.80
Property Damage		87.99	87.99	94.67	94.67
SEF 44		4.33	4.33	5.06	5.06
Total Complusory Section (plus SEF 44)		250.99	219.49	284.91	247.99
Reduction in Cost			31.50		36.92

Comparison of Discounted Loss Costs --- Option 3p

Benefit	Current Policy @7/90	Proposed Policy @7/90	Current Policy @1/92	Proposed Policy @1/92
Medical	4.24	12.00	4.83	13.66
Funeral		0.36	1.08	0.411.23
Death	2.04	11.63	2.32	13.23
Disability - Wage Earner	3.81	22.30	4.34	25.38
Deemed Employed	0.18	0.53	0.20	0.60
Student	nil	1.25	nil	1.42
Housecare	0.44	1.18	0.50	1.34
Childcare	nil	1.32	nil	1.50
Other	0.23	0.23	0.26	0.26
Total No-Fault	11.30	51.52	12.86	58.63
Uninsured Motorist - B.I.	0.77	0.28	0.88	0.32
- P.D.	nil	nil	nil	nil
Total Accident Benefits		12.07	51.80	13.7458.95
Bodily Injury (excluding expense)	127.54	46.81	149.15	54.74
B.I. Claim Adjustment Expense	19.06	7.00	22.29	8.19
Offset from Higher A.B.	n/a	(10.21)	n/a	(11.61)
Total Bodily Injury	146.60	43.60	171.44	51.32
Property Damage	87.99	87.99	94.67	94.67
SEF 44	4.33	2.17	5.06	2.54
Total Complusory Section (plus SEF 44)	250.99	185.56	284.91	207.48
Reduction in Cost		65.43		77.43

Comparison of Discounted Loss Costs --- Option 3s

Benefit		Current Policy @7/90	Proposed Policy @7/90	Current Policy @1/92	Proposed Policy @1/92
Medical		4.24	12.00	4.83	13.66
Funeral			0.36	1.08	0.411.23
Death		2.04	11.63	2.32	13.23
Disability -	Wage Earner	3.81	13.86	4.34	15.77
	Deemed Employed	0.18	0.53	0.20	0.60
	Student	nil	1.25	nil	1.42
	Housecare	0.44	1.18	0.50	1.34
	Childcare	nil	1.32	nil	1.50
Other		0.23	0.23	0.26	0.26
Total No-Fault		11.30	43.08	12.86	49.02
Uninsured Motorist	- B.I.	0.77	0.28	0.88	0.32
	- P.D.	nil	nil	nil	nil
Total Accident Benefits			12.07	43.36	13.7449.34
Bodily Injury (excluding expense)		127.54	46.81	149.15	54.74
B.I. Claim Adjustment Expense		19.06	7.00	22.29	8.19
Offset from Higher A.B.		n/a	(8.04)	n/a	(9.15)
Total Bodily Injury		146.60	45.77	171.44	53.78
Property Damage		87.99	87.99	94.67	94.67
SEF 44		4.33	2.17	5.06	2.54
Total Complusory Section (plus SEF 44)		250.99	179.29	284.91	200.33
Reduction in Cost			71.70		84.58

APPENDIX C

DETAILED ANALYSIS BY SECTION

DETAILED ANALYSIS BY SECTION

I 1. **Medical/Rehabilitation, Long Term Care.**

Current:

Reasonable and essential expenses, excess to Alberta Health Care Insurance, up to $5,000 per person within 2 years.

Option 1:

Reasonable and essential expenses, excess of Alberta Health Care Insurance, up to $25,000 per person within 2 years.

Option 2:

Coverage up to a maximum of $500,000 would be available for medical and re benefits over the greater of 10 years or 20 years less the age of the victim at tl the accident. Long term care up to a maximum of $500,000 over the lifetime c victim.

Option 3:

Same as option 2.

Assumptions:

(a) 0.2% of the claimants are so severely injured that major renovations of resid or vehicles are necessary. The 0.2% was selected after a study of the IBC siz loss distribution in policy years 1984-1985; the percentage of claimants which l catastrophic injuries in the Accident Benefits Claims Survey was slightly less.

Options 2 & 3:

Claimants will receive $95,000 in year one, $20,000 in each year of the next three years, and $10,000 for the following six years. Yearly benefit is indexed with CPI to reflect inflation.

Claimant is aged 30. Mortality is based on 85% of the 1969-1975 C.I.A. Mortality Table.

(b) 6.5% of the claimants either recover or cannot satisfy the more stringent definition of disability after 2 years; based on Osborne survey.

Options 2 & 3:

6.5% of claimants have partial disability and require vocational training @$4,000 per person. Such cost is not in the current system because the rehabilitation industry is still in its infancy stage.

(c) 0.2% of the claimants require long term care.

Options 2 & 3:

Claimants will receive the monthly maximum of $3,000 per month until the limit is used up. Claimant is aged 30. Mortality is based on 85% of the 1969-1975 C.I.A. Mortality Table. The first monthly payment is made after 12 months.

(d) Medical claim frequency is assumed to be 0.0063.

(e) All present values are based on a discount rate of 8% p.a.

(f) CPI is 5.0% p.a.

(g) **Option 1:**

Cost of benefits will increase by 50%.

Additional Costs:

(1) **Medical/Rehabilitation Cost.**

= vocational training and renovations

Options 2 & 3:

$$(.065 \times .0063 \times \$4{,}000) + (.002 \times .0063 \times [\$75{,}000 + (\sum_{t=0}^{3} \$20{,}000 \times {}_t\eta_{30} (1.05 \div 1.08)^t) + (\sum_{t=4}^{9} \$10{,}000 \times {}_t\eta_{30} \times (1.05 \div 1.08)^t)])$$

$$= \$1.64 + \$2.54 = \$4.18$$

${}_t\eta_{30}$ = probability claimant aged 30 survives t years

(2) **Future Care Expense Cost.**

Options 2 & 3:

$$(.002 \times .0063) \times \sum_{t=0}^{166} \frac{\$3{,}000}{1.08} \times {}_t\eta_{30}^{(m)} \div (1 + j)^t$$

$$= \quad \$3.58$$

${}_t\eta_{30}^{(m)}$ = probability claimant aged 30 survives t months

$1 + j = (1.08)^{1/12}$

I 2. **Death Benefits.**

Current:

Principal Sum Age of Deceased at Date of Accident	**Head of Household**	**Spouse in Two-Parent Household**	**Dependent Relative**
Up to age of 4 years	---	---	500
5 to 9 years	---	---	1,000
10 to 17 years	5,000	5,000	1,500
18 to 64 years	5,000	5,000	1,000
65 to 69 years	5,000	5,000	1,000
70 years and over	5,000	5,000	500

In addition, with respect to the death of head of household,

a. Where there are two or more survivors, being spouse and/or dependent relatives, the principal sum payable is increased by 20% for each survivor other than the first; and

b. Where there are one or more survivors, being spouse and/or dependent relatives, 1% of the total principal sum payable each week for a period of 104 weeks. Any weekly benefit shall terminate upon death of all such survivors.

Option 1:

Principal Sum Age of Deceased at Date of Accident	Head of Household	Spouse in Two-Parent Household	Dependent Relative
Up to age of 4 years	---	---	2,000
5 to 9 years	---	---	2,000
10 to 17 years	10,000	10,000	2,000
18 to 64 years	10,000	10,000	2,000
65 to 69 years	10,000	10,000	2,000
70 years and over	10,000	10,000	2,000

In addition, with respect to the death of head of household,

a. Where there are two or more survivors, being spouse and/or dependent relatives, the principal sum payable is increased by 10% for each survivor other than the first; and

b. Where there are one or more survivors, being spouse and/or dependent relatives, 1% of the total principal sum payable each week for a period of 104 weeks. Any weekly benefit shall terminate upon death of all such survivors.

Options 2 & 3:

(a) The death of the head of household or spouse results in a payment of $25,000 plus an additional sum of $10,000 for each other survivor.

(b) The death of a dependent results in a payment of $10,000.

Assumptions:

(a) The results are based on Alberta Traffic Collision Statistics 1989, Table 3.2 (page 15).

(b) Under both the current system and the revised systems, benefit is based on the status on the date of the accident of the deceased in a household, where a spouse and/or dependents survive.

(c) There was one (1) additional dependent per claim.

(d) The additional cost of the weekly benefit was not included in the current or proposed options.

Additional Costs:

Option 1:

Age of Deceased	Number	Status of Deceased	Current Benefit	Proposed Benefit
less than 5	13	Dependent	$6,500	$26,000
5 to 9	13	Dependent	$13,000	$26,000
10 to 14	14	Dependent	$21,000	$28,000
15 to 19	60	Dependent	$90,000	$120,000
20 to 24	55	Head	$275,000	$550,000
25 to 29	47	Head + 1	$282,000	$517,000
30 to 34	45	Head + 1	$270,000	$495,000
35 to 44	71	Head + 1	$426,000	$781,000
45 to 54	46	Head + 1	$276,000	$506,000
55 to 64	46	Head + 1	$276,000	$506,000
over 64	77	Head	$385,000	$770,000
Total	487		$2,320,500	$4,325,000

Costs of benefits will increase by 86.4%.

Options 2 & 3:

Age of Deceased	Number	Status of Deceased	Current Benefit	Proposed Benefit
less than 5	13	Dependent	$6,500	$130,000
5 to 9	13	Dependent	$13,000	$130,000
10 to 14	14	Dependent	$21,000	$140,000
15 to 19	60	Dependent	$90,000	$600,000
20 to 24	55	Head	$275,000	$1,375,000
25 to 29	47	Head + 1	$282,000	$1,645,000
30 to 34	45	Head + 1	$270,000	$1,575,000
35 to 44	71	Head + 1	$426,000	$2,485,000
45 to 54	46	Head + 1	$276,000	$1,610,000
55 to 64	46	Head + 1	$276,000	$1,610,000
over 64	77	Head	$385,000	$1,925,000
Total	487		$2,320,500	$13,225,000

Cost of benefits will increase by 469.9%.

I 3. Funeral Expense.

Current:

$1,000 per claimant fatally injured in accident.

Options 1, 2, & 3:

$3,000 per claimant fatally injured in accident.

Assumption:

All $3,000 will be used.

Additional Costs:

The proposed benefit schedule will increase cost by 200%.

I 4.A Disability Benefit -- wage earners and deemed to be employed.

Current:

80% of average gross weekly earnings subject to a maximum benefit of $150 payable for a maximum of 104 weeks. There is a 7 day waiting period. The benefit payable is reduced where other benefits for loss of time are payable. The insurer is liable only for that proportion of benefits for loss of time that the money value of the time of the person insured bears to the aggregate of the benefits for loss of time payable under all such contracts.

Option 1:

75% of average gross weekly earnings subject to a maximum benefit of $500 payable for a maximum of 104 weeks. There is 7 day waiting period. The benefit payable is reduced where other benefits for loss of time are payable. The insurer is liable only for that proportion of benefits for loss of time that the money value of the time of the person insured bears to the aggregate of the benefits for loss of time payable under all such contracts.

Options 2 & 3 primary:

75% of average gross weekly earnings subject to a maximum benefit of $500 payable for life. There is 7 day waiting period for employed claimants and a 60 day waiting period for deemed to be employed claimants. The benefits payable is primary to other sources of income replacement.

Options 2 & 3 secondary:

75% of average gross weekly earnings subject to a maximum benefit of $500 payable for life. There is 7 day waiting period for employed claimants and a 60 day waiting period for deemed to be employed claimants. The benefits payable is secondary to other sources of income replacement (except UIC).

Assumptions:

(a) Half of unemployed claimants (i.e., 3.1%) were deemed to be employed (employed 6 of the last 12 months); based on the Accident Benefits Claims Survey database, 6.2% of private passenger vehicle claimants are unemployed.

(b) Mortality rate is based on 85% of the 1965-1979 C.I.A. Mortality Table. Current studies indicate that the mortality rate is about 80% to 85% of the 1969-1975 C.I.A. Mortality Table.

(c) All present values are calculated using a discount rate of 8% p.a.

(d) If a claimant in the accident benefits claims survey appeared to receive a weekly payment higher than the current maximum, his time loss was recalculated using $150 as the weekly benefit.

(e) Time loss is subject to seven (7) day deductible.

(f) Only claimants with time loss, and non-zero weekly wage were included in the analysis.

(g) Accident benefits claims survey was used to determine the percentage of the proposed benefits over the current benefits. We assumed 2.8% of the claimants are permanently disabled. The 2.8% was selected after a study of the permanently disabled claimants (1.4%) in the Third Party Liability Claims Survey database, doubled to include totally at-fault claimants.

(h) All permanently disabled wage earners are assumed to be age 30 and receive on average, 20% (being 35% x 60% approximately) of wage loss from other sources.

(i) The average change in Consumer Price Index in Alberta is 4.5% per annum. Since the claims databases are based on historical information, gross wage, other benefits, employee benefits, and government benefits were inflated by a factor of 4.5% p.a. to 1 January 1992.

(j) Benefits are primary to U.I.C.

(k) Permanently disabled claimants have weekly wage equivalent to the average industrial wage in Alberta. The average industrial wage in Alberta @ 1/92 will be $554.00 (based on a 1990 average figure of $518.60).

(l) **Options 2 & 3 primary:**

An additional 30% of claimants will receive benefits; under the current system, these claimants were fully compensated from other sources and did not apply for benefits.

Costs:

(i) Average claim size of proposed benefits to claimants with non-permanent injuries.

Option 1:

Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} ben_k \div (1 + j)^t = \$5,346$$

Deemed to be Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} ben_k \div (1 + j)^t = \$5,346$$

$time_k$ = time loss in months of the k^{th} claimant

j = discount rate (8% p.a.) converted to monthly rate

ben_k = proposed monthly benefit of k^{th} claimant

C = number of claimants in sample = 357

Options 2 & 3 primary:

Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} ben_k \div (1 + j)^t = \$5,649$$

C = number of claimants in sample = 357

Deemed to be Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} ben_k \div (1 + j)^t = \$6,244$$

$time_k$ = time loss in months of the k^{th} claimant

j = discount rate (8% p.a.) converted to monthly rate

ben_k = proposed monthly benefit of k^{th} claimant

C = number of claimants in sample = 222

Options 2 & 3 secondary:

Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} ben_k \div (1 + j)^t = \$5,122$$

C = number of claimants in sample = 357

Deemed to be Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} ben_k \div (1 + j)^t = \$6,244$$

$time_k$ = time loss in months of the k^{th} claimant

j = discount rate (8% p.a.) converted to monthly rate

ben_k = proposed monthly benefit of k^{th} claimant

C = number of claimants in sample = 222

(ii) Average claim size of proposed benefits to claimants with permanent injuries.

Average weekly industrial aggregate wage
(January 1992)

= $554.00

${}_t\eta_{30}^{(m)}$ = probability claimant aged 30 survives t months

Option 1:

Employed

$$\text{Avg. Claim Size} = \sum_{t=0}^{23} ben \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$40,140$$

Deemed to be Employed

$$\text{Avg. Claim Size} = \sum_{t=0}^{23} ben \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$40,140$$

ben = monthly benefit = 4.33 x .75 x $554.00 (@ 1/1/92) = $1,800.50

Options 2 & 3 primary:

Employed

$$\text{Avg. Claim Size} = \sum_{t=0}^{912} \text{ben} \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$267{,}299$$

Deemed to be Employed

$$\text{Avg. Claim Size} = \sum_{t=2}^{912} \text{ben} \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$263{,}709$$

ben = monthly benefit = 4.33 x .75 x $554.00 (@ 1/1/92) = $1,800.50

Options 2 & 3 secondary:

Employed

$$\text{Avg. Claim Size} = \sum_{t=0}^{912} \text{ben} \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$196{,}019$$

ben = monthly benefit = 4.33 x [(.75 x $554.00) - (.2 x $554.00)] = $1,320.36

Deemed to be Employed

$$\text{Avg. Claim Size} = \sum_{t=2}^{912} \text{ben} \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$263{,}709$$

ben = monthly benefit = 4.33 x .75 x $554.00 (@ 1/1/92) = $1,800.50

(iii) Average claim size of proposed benefits to wage earners.

Avg. Claim Size = [1.0 x (average claim size of claimants with non-permanent injuries) + 0.028 (average claim size of claimants with permanent injuries)]/1.028

Option 1:

Employed

Avg. Claim Size = (1.00 x $5,346 + 0.028 x $40,140)/1.028 = $6,294

Deemed to be Employed

Avg. Claim Size = (1.00 x $5,346 + 0.028 x $40,140)/1.028 = $6,294

Options 2 & 3 primary:

Employed

Avg. Claim Size = (1.00 x $5,649 + 0.028 x $267,299)/1.028 = $12,776

Deemed to be Employed

Avg. Claim Size = (1.00 x $6,244 + 0.028 x $263,709)/1.028 = $13,257

Options 2 & 3 secondary:

Employed

Avg. Claim Size = (1.00 x $5,122 + 0.028 x $196,019)/1.028 = $10,322

Deemed to be Employed

Avg. Claim Size = (1.00 x $6,244 + 0.028 x $263,709)/1.028 = $13,257

(iv) Average claim size of current benefits to claimants with non-permanent injuries.

Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} ben_k \div (1 + j)^t = \$2,512$$

Deemed to be Employed

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} ben_k \div (1 + j)^t = \$2,512$$

$time_k$ = time loss in months of the k^{th} claimant

j = discount rate (8% p.a.) converted to monthly rate

ben_k = current monthly benefit of k^{th} claimant

C = number of claimants in sample = 357

(v) Average claim size of current benefits to claimants with permanent injuries.

Employed

$$\text{Avg. Claim Size} = \sum_{t=0}^{23} 4.33 \times ben \div (1 + j)^t = \$14,491$$

Deemed to be Employed

$$\text{Avg. Claim Size} = \sum_{t=0}^{23} 4.33 \times ben \div (1 + j)^t = \$14,491$$

ben = \$150

${}_t\eta_{30}^{(m)}$ = probability claimant aged 30 survives t months

(vi) Average claim size of current benefits to wage earners.

Employed

Avg. Claim Size = (1.00 x \$2,512 + 0.028 x \$14,491)/1.028 = \$2,838

Deemed to be Employed

Avg. Claim Size = (1.00 x \$2,512 + 0.028 x \$14,491)/1.028 = \$2,838

(vii) Change in average claim size of benefits to wage earners.

$$\text{Percentage change} = 100\% \times \frac{\text{(Proposed - Current)}}{\text{Current}}$$

Option 1:

Employed

$$= \quad 100\% \times \frac{(\$6,294 - \$2,838)}{\$2,838} = 121.8\%$$

Deemed to be Employed

$$= \quad 100\% \times \frac{(\$6,294 - \$2,838)}{\$2,838} = 121.8\%$$

Options 2 & 3 primary:

Employed

$$= \quad 100\% \times \frac{(\$12,776 - \$2,838)}{\$2,838} = 350.2\%$$

Deemed to be Employed

$$= \quad 100\% \times \frac{(13,257 - \$2,838)}{\$2,838} = 367.1\%$$

Options 2 & 3 secondary:

Employed

$$= \quad 100\% \times \frac{(\$10,322 - \$2,838)}{\$2,838} = 263.7\%$$

Deemed to be Employed

$$= \quad 100\% \times \frac{(\$13,257 - \$2,838)}{\$2,838} = 367.1\%$$

(viii) Change in frequency.

Option 1:

No change in frequency.

Options 2 & 3 primary:

Wage earners:

Frequency will increase by 30%.

Deemed to be employed:

Frequency will decrease by 37.8% [1 - $\frac{222}{357}$ x 100%].

Options 2 & 3 secondary:

Wage Earners:

No change in frequency.

Deemed to be employed:

Frequency will decrease by 37.8% [1 - $\frac{222}{357}$ x 100%].

I4.B Disability Benefits --- Students.

Current:

None.

Option 1:

None.

Options 2 & 3:

(a) Until deemed eligible to enter the work force, a lump sum yearly payment of:

(i) $1,000 per year lost at the elementary school level

(ii) $2,000 per year lost at the secondary school level

(iii) $4,000 per year lost at the post-secondary school level.

(b) A student with a lengthy disability will be eligible to receive a weekly benefit if, at the time of the accident:

(i) he is attending elementary school and attaining age nineteen (19) while still disabled

(ii) he is attending secondary school and attaining age nineteen (19) while still disabled

(iii) he is attending a post-secondary institution and attaining age twenty-three (23) while still disabled

at which time he/she will receive a weekly benefit of $340 per week.

Assumptions:

Options 2 & 3:

(a) There is a downward bias for students to be included in the Accident Benefits Claims Survey as only claimants eligible for accident benefits are included; since there does not exist a current benefit in the form of a student benefit, some students would be omitted from the survey.

Due to the limited information obtained on students via the Accident Benefits Claims Survey, the Third Party Liability Claims Survey is used in arriving at the distribution of students by scholastic level.

(b) To be included in this analysis, the claimant must be a student and experience time loss as a result of the accident. It is assumed that the number of claimants will increase by 12.4% (9.4% ÷ 75.6%) if the benefit were available today; based on the Accident Benefits Claims Survey, 9.4% of claimants are students, 75.6% of claimants currently eligible to receive disability benefits.

(c) As the claims survey did not include information on level of schooling, level of schooling was determined by age.

A claimant is deemed to be:

(i) at the elementary school level if fourteen (14) years of age or under

(ii) at the secondary school level if fifteen (15) to eighteen (18) years of age

(iii) at the post-secondary school level if nineteen (19) years of age or over.

(d) A claimant is deemed to lose a year of education if disabled for thirteen (13), six (6), and three (3), weeks of a school year at the elementary, secondary and post-secondary school levels respectively.

(e) The lump sum yearly benefits are based on the grade the claimant would be attending if not disabled.

(f) As there is limited information on students with lengthy disabilities, the assumption is the same as wage earners, i.e., 2.8% are permanently disabled.

(g) In calculating average lump sum amounts, the time loss distribution of wage earners based on the data obtained in the Accident Benefits Claims Survey is used. The average lump sum payment paid to students involved in private passenger vehicle accidents is predicated on the assumption that the student is equally likely to be in attendance at an elementary school, a secondary school, or at a post-secondary institution.

(h) Additional cost of permanently disabled students is based on the data obtained in the Third Party Liability Claims Survey. This additional cost is the present value of $340 per week, discounted at 8% p.a. compounded monthly, and mortality is assumed to be 85% of 1969-1975 CIA Mortality Table. Due to limited information on permanently disabled students, the additional cost is based on the median age of claimants at each scholastic level.

Median Age:	elementary school	9 years
	secondary school	16 years
	post-secondary school	22 years

Moreover, the additional cost for students involved in private passenger and commercial vehicle accidents is predicated on the assumption that students are equally likely to be in attendance at an elementary school, a secondary school or at a post-secondary institution.

Costs:

(i) Average claim size of loss of schooling benefit

Avg. Claim Size = $1,934

(ii) Average claim size of loss of capacity to earn income benefit

j = discount rate (8.0% p.a.) converted to monthly rate

ben = weekly benefit = $340

Cost of Claimant aged 9 with permanent injuries

$$\text{Avg. Claim Size} = (\$1{,}000 \times \sum_{t=0}^{9} (1.08)^{-t}) + \sum_{t=120}^{1044} 4.33 \times \text{ben} \times {}_t\eta_{19}^{(m)} \div (1+j)^t$$

= $7,247 + $102,956 = $110,203

Cost of claimant aged 16 with permanent injuries

$$\text{Avg. Claim Size} = (\$2{,}000 \times \sum_{t=0}^{2} (1.08)^{-t}) + \sum_{t=36}^{1044} 4.33 \times \text{ben} \times {}_t\eta_{19}^{(m)} \div (1+j)^t$$

$$= \$5{,}567 + \$176{,}873 = \$182{,}440$$

Cost of claimant aged 22 with permanent injuries

Avg. Claim Size = $4,000

$$+ \sum_{t=12}^{996} 4.33 \times \text{ben} \times {}_t\eta_{23}^{(m)} \div (1+j)^t$$

$$= \$4{,}000 + \$205{,}600 = \$209{,}600$$

$$\text{Avg. Claim Size} = \frac{\$110{,}203 + \$182{,}440 + \$209{,}600}{3}$$

$$= \$167{,}414$$

(iii) Average claim size of proposed benefits to students

Avg. Claim Size = (1.00 x $1,934 + 0.028 x $167,414)/1.028 = $6,441

(iv) Change in frequency

Options 2 & 3:

Frequency will increase by 12.4%; due to new claimants not previously eligible to receive benefits.

I4.C Home Care

Current:

A weekly benefit of $50 per week for not more than 26 weeks if completely incapacitated and unable to perform any of his or her duties.

Option 1:

A weekly benefit of $70 per week for not more than 26 weeks if completely incapacitated and unable to perform any of his or her duties.

Options 2 & 3:

A weekly benefit payable on the basis of reasonable expenses incurred up to a maximum of $50 per week of disability.

Assumptions:

a) As there is limited information on disabled homemakers, the time loss distribution for homemakers is the same as wage earners; except benefit not subject to 7 day waiting period.

b) All permanently disabled claimants are assumed to be aged 30.

c) 2.8% of homemakers are permanently disabled; same as wage earners.

d) All present values are calculated using a discount rate of 8.0% p.a. compounded monthly.

e) Mortality rate is based on 85% of the 1969-1975 CIA Mortality Table.

f) Based on the accident benefits claims survey database, 7.5% of private passenger vehicle claimants are homemakers; representing 9.9% of disability claimants currently eligible to receive benefits (9.9% = 7.5% ÷ 75.6%).

h) **Current:**
Claimants receive weekly benefit of $50 per week.

Option 1:
Claimants receive weekly benefit of $70 per week.

Options 2 & 3:
Claimants receive weekly benefit of $50 per week.

Costs:

(i) Average claim size of proposed benefits to claimants with non-permanent injuries

Option 1:

$$= 1/C \times \sum_{k=0}^{C} \sum_{t=0}^{time_k} (4.33 \times \$70) \div (1+j)^t = \$863$$

$time_k$ = time loss in months of the kth claimant; capped at 26 weeks

j = discount rate (8.0% p.a.) converted to a monthly rate

C = number of claimants in sample = 386

Options 2 & 3:

$$= 1/C \times \sum_{k=0}^{C} \sum_{t=0}^{time_k} (4.33 \times \$50) \times (1+i)^t \div (1+j)^t = \$857$$

$time_k$ = time loss in months of the kth claimant; capped at 26 weeks

j = discount rate (8.0% p.a.) converted to a monthly rate

C = number of claimants in sample = 386

(ii) Average claim size of proposed benefits to claimants with permanent injuries

Option 1:

Cost of claimant aged 30 with permanent injuries

$$= \sum_{t=0}^{5} (4.33 \times \$70) \times {}_t\eta_{30}^{(m)} \div (1+j)^t$$

$$= \$1,791$$

${}_t\eta_{30}^{(m)}$ = probability claimant aged 30 survives t months

j = discount rate (8.0% p.a.) converted to a monthly rate

Options 2 & 3:

$$= \sum_{t=0}^{912} (4.33 \times \$50) \times {}_t\eta_{30}^{(m)} \div (1+j)^t$$

= $32,166

(iii) Average claim size of proposed benefits to homemakers

Avg. Claim Size = [1.0 x (average claim size of claimants with non-permanent injuries) + 0.028 x (average claim size of claimants with permanent injuries)]/1.028

Option 1:

Avg. Claim Size = [(1.00 x $863) + (0.028 x $1,791)]/1.028 = $888

Options 2 & 3:

Avg. Claim Size = [(1.00 x $857) + (0.028 x $32,166)]/1.028 = $1,710

(iv) Average claim size of current benefits to claimants with non-permanent injuries

$$\text{Avg. Claim Size} = 1/C \sum_{k=1}^{C} \sum_{t=0}^{time_k} (4.33 \times ben) \div (1+j)^t = \$617$$

$time_k$ = time loss in months of the kth claimant

ben = $50

j = discount rate (8% p.a.) converted to a monthly rate

C = number of claimants in sample = 386

(v) Average claim size of current benefits to claimants with permanent injuries

$$\text{Avg. Claim Size} = \sum_{t=0}^{5} 4.33 \times \text{ben} \times {}_t\eta_{30}^{(m)} \div (1 + j)^t = \$1,279$$

ben = $50

${}_t\eta_{30}^{(m)}$ = probability claimant aged 30 survived t months

(vi) Average claim size of current benefits to homemakers

[(1.00 x $617) + (0.028 x $1,279)]/1.028 = $635

(vii) Change in average claim size of benefits to homemakers

$$\text{percentage increase} = 100\% \times \frac{\text{proposed homemaker benefit claim size}}{\text{current homemaker benefit claim size}}$$

Option 1:

$$= 100\% \times \frac{\$888}{\$635} = 139.8\%$$

Options 2 & 3:

$$= 100\% \times \frac{\$1,710}{\$635} = 269.3\%$$

(vii) Change in frequency.

Options 1, 2, & 3:

No change.

I4.D CHILDCARE

Current:

None.

Option 1:

None.

Options 2 & 3:

A weekly benefit of $200 plus an additional $50 per week per child/dependent. subject to a maximum of $350 per week would be payable for child care expenses when the person normally providing the child care was disabled.

Assumptions:

a) Only homemakers are eligible. As there is limited information on disabled homemakers, the time loss distribution for homemakers is the same as wage earners; except benefit not subject to 7 day waiting period.

b) All permanently disabled claimants are assumed to be aged 30.

c) 2.8% of homemakers are permanently disabled; same as wage earners.

d) All present values are calculated using a discount rate of 8.0% p.a. compounded monthly.

e) Mortality rate is based on 85% of the 1969-1975 CIA Mortality Table.

f) 9.9% of private passenger vehicle claimants are eligible to receive benefits; same as home care frequency.

g) Since the claims survey data does not contain information as to the number of children/dependents, one (1) child/dependent per household is assumed.

Option 1:

No benefit.

Options 2 & 3:

Claimants receive weekly benefit of $250 per week.

Costs:

(i) Average claim size of proposed benefits to claimants with non-permanent injuries

Options 2 & 3:

$$\text{Avg. Claim Size} = 1/C \sum_{k=0}^{C} \sum_{t=0}^{\text{time}_k} (4.33 \times 250) \div (1 + j)^t = \$4,286$$

time_k = time loss in months of the kth claimant

j = discount rate (8.0% p.a.) converted to a monthly rate

C = number of claimants in sample = 386

(ii) Average claim size of proposed benefits to claimants with permanent injuries

$$\text{Avg. Claim Size} = \sum_{t=0}^{912} (4.33 \times \$250) \times {}_t\eta_{30}^{(m)} \div (1+j)^t = \$160,831$$

${}_t\eta_{30}^{(m)}$ = probability claimant aged 30 survives t months

j = discount rate (8.0% p.a.) converted to a monthly rate

(iii) Average claim size of child care benefits

Avg. Claim Size = [1.0 x (average claim size of claimants with non-permanent injuries) + 0.028 x (average claim size of claimants with permanent injuries)]/1.028

Option 1:

None.

Options 2 & 3:

Avg. Claim Size = [(1.00 x $4,286) + (0.028 x $160,831)]/1.028 = $8,550

(iv) Change in frequency.

Options 2 & 3:

Frequency will increase by 9.9%; due to new claimants not previously eligible to receive benefits.

I 5. OTHER

Options 1, 2, & 3:

No change.

I 6. Uninsured Motorist Coverage (BI portion only)

Current:

Coverage against accidents caused by uninsured motorists.

Options 1, 2, & 3:

Coverage against accidents caused by uninsured motorists.

Assumptions:

(a) Loss cost of the B.I. portion of the U.M. coverage will decrease at the same rate as the B.I. benefits.

Cost:

Options 1 & 2:

Loss cost will decrease by 26.9%*. [100% - (120% x 60.9%)].

Option 3:

Loss cost will decrease by 63.3%.*

*Based on Residual bodily injury liability. (section II.1)

II. 1. Residual Bodily Injury Liability Loss Costs

Current:

None.

Option 1:

$10,000 deductible on all non-pecuniary awards and increase ceiling to $300,000.

Option 2:

Same as option 1.

Option 3:

Tort litigation beyond no-fault benefits subject to threshold

(a) death, or
(b) permanent serious disfigurement; or
(c) permanent serious impairment of an important bodily function, caused by continuing injury which is physical in nature.

Assumptions:

Options 1 & 2:

There is no claims inflation. We have assumed claim cost will increase by 20% to reflect the increased ceiling and exaggeration of claims to offset the deductible.

Option 3:

We have defined the threshold as follows:

A claimant in the third party liability claims survey database must be deceased or have a duration of disability of at least two (2) years or have received non-pecuniary payment of at least $100,000, or suffered one or more of the following injuries:

(i) brain or spinal column - paraplegic, quadraplegic or vegetative state, other

(ii) face - laceration with serious scar

(iii) eyes - partial/total loss or loss of use of 1 or 2 eyes

(iv) ears - partial/total loss of loss of use of 1 or 2 ears

(v) nose - resulting in disfigurement

(vi) voice and larynx - loss of voice

(vii) neck - vertebrae/disk fracture

(viii) back - vertebrae/disk fracture

(ix) arm and hand - loss of arm or hand, loss of both arms or hands, loss of fingers

(x) leg and foot - loss of leg or foot, loss of both legs or feet

Costs:

Options 1 & 2:

Based on the Third Party Liability Claims survey database, a $10,000 deductible on non-pecuniary loss imposed on all claims will remove $2,715,129 in 1990 claims dollars. Thus, 60.9% [($6,942,301 - $2,715,129) ÷ $6,942,301)] of bodily injury cost will remain. However, assuming the increased ceiling and exaggeration of claims to offset the deductible will increase cost by 20%, thus, 73.1% of bodily injury injury cost will remain.

Option 3:

Based in the Third Party Liability Claims survey database, private passenger claimants exceeding the threshold received $4,223,220. Thus, 36.7% ($4,223,220 ÷ $11,511,548) of bodily injury cost will remain.

II 2. Property Damage and SEF 44

We assumed property damage loss cost will remain the same as the current policy.

Option 1:

We have assumed no changed in SEF 44 loss cost.

Options 2 & 3:

The enhancement of medical/long term care benefits and disability income benefit should reduce the SEF 44 claim cost. However, in certain serious injury cases, settlement was limited by the current policy limit and for these cases, the total payment (no fault benefits and tort benefits) would be higher than in the present system. On balance, we assumed that the SEF 44 loss cost would decrease by 50%.

III Reduction in Liability Claim Cost as an Offset to Accident Benefit Enhancements

When accident benefits are increased substantially, they would reduce the economic loss component and sometimes non-economic loss component of the bodily injury claim. This offset has always been recognized by the insurance industry.

The claims survey, however, allows us to quantify the extent of the offset more precisely than in the past. If a claimant is entitled to tort benefits, then all the accident benefits received could be deducted from his third party liability entitlement.

Based on the claims survey, claimants exceeding the threshold received 36.7% of total bodily injury dollars.

Based on the claims survey, 73.4% of the injured persons in private passenger were not totally at fault and therefore, were entitled to tort benefits.

Option 1:

70% of the private passenger automobiles enhanced accident benefits will be offset by a dollar-for-dollar third party liability reduction.

offset = 70% x (accident benefits enhancement)
= .7 x ($21.49 - $12.07) = $6.59

Option 2 primary:

70% of the private passenger automobiles enhanced accident benefits will be offset by a dollar-for-dollar third party liability reduction.

offset = 70% x (accident benefits enhancement)
= .7 x ($52.08 - $12.07) = $28.01

Option 2 secondary:

70% of the private passenger automobiles enhanced accident benefits will be offset by a dollar-for-dollar third party liability reduction.

offset = 70% x (accident benefits enhancement)
= .7 x ($43.64 - $12.07) = $22.10

Option 3 primary:

70% of the private passenger automobiles enhanced accident benefits of claimants exceeding the threshold will be offset by a dollar-for-dollar third party liability reduction.

offset = 70% x 36.7% x (accident benefits enhancement)
= .7 x .367 x ($51.80 - $12.07) = $10.21

Option 3 secondary:

70% of the private passenger automobiles enhanced accident benefits of claimants exceeding the threshold will be offset by a dollar-for-dollar third party liability reduction.

offset = 70% x 36.7% x (accident benefits enhancement)
= .7 x .367 x ($43.36 - $12.07) = $8.04

APPENDIX 4

ECKLER PARTNERS
ACTUARIES AND CONSULTANTS

11 July 1991

INTERNATIONALLY
WOODROW MILLIMAN

BY POST & FAX --- 1-403-420-1763

Ms. Shelley L. Miller
Chomicki Baril
2101 Esso Centre
10060 Jasper Avenue
Edmonton, Alberta
T5J 4K2

ECKLER PARTNERS LTD.
789 DON MILLS ROAD
DON MILLS, ONTARIO M3C 1T8
TELEPHONE (416) 429-3330
TELECOPIER (416) 429-3794

Dear Ms. Miller:

You asked us to estimate the potential savings in automobile insurance premium if:

a. a $10,000 deductible on non-pecuniary loss is imposed on claims under $10,000, or

b. a $10,000 deductible on non-pecuniary loss is imposed on all claims.

From the claim survey, we were able to estimate the non-pecuniary loss component of each claim in 1990. When a deductible of up to $10,000 was imposed on the non-pecuniary portion, we could determine the residual amount of each claim. Party and party cost, and prejudgment interest were also reduced proportionally. Under scenarios (a) and (b), the savings in claim cost should be about $35 and $75 per car, respectively. When the market rates are adequate, such savings in claim cost should translate into premium savings of $43 and $91 per car, respectively. (Derivation of the figures are shown in Table 1). However, market rates are not adequate currently. Market forces would try to reduce the rate inadequacy first before passing along any savings. It is impossible for us to forecast the actual "savings" which will be passed along to the consumers, but we are certain that only part of the calculated premium savings will materialize in today's market.

We should point out that the above deductible scheme will lose some of its impact over time due to claims inflation and exaggeration of non-pecuniary loss to offset the deductible. We also think that scenario (a) is impractical

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JEREMY J. COLLISBIRD, FSA FCIA
JOHN CORP, FIA FCIA
PAUL F. DELLA PENNA, FSA FCIA
B.B. (BEN) DIBBEN, FIA FCIA
PATRICK F. FLANAGAN, FSA FCIA
JACOB LEVI, FSA FCIA
W. PAUL MCCROSSAN, FSA FCIA
MICHAEL B. MCGUINNESS, FSA FCIA
JOHN PETTIGREW, FFA FCIA
A. DOUGLAS POAPST, FSA FCIA
PIERRE ST-ONGE, FSA FCIA
MURRAY A. SEGAL, FSA FCIA
DAVID A. SHORT, FSA FCIA
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and inequitable. It is impractical because every claimant would try to negotiate to settle for at least $10,000 including the non-pecuniary loss component and escape the deductible. It is inequitable because a claimant with a $10,000 settlement will pay no deductible while someone with a $9,999 settlement has to absorb the whole deductible.

Yours truly,

Joe S. Cheng

encl.
JSC:vc
AAIB*G

TABLE 1

		Scenario A up to $10,000 deductible applied to non-pecuniary loss of claims under $10,000	Scenario B up to $10,000 deductible applied to non-pecuniary loss of all claims
(1)	Proposed reform measure		
(2)	Total claim cost from B.I. survey	$6,942,301	$6,942,301
(3)	Reduction in B.I. claims	$1,280,284	$2,715,129
(4)	Cost reduction as a %	18.4%	39.1%
(5)	1990 B.I. loss cost	189.43	189.43
(6)	Reduction in B.I. claims cost	$35	$74
(7)	Expense ratio	23.6%	23.6%
(8)	Underwriting margin	(4.5%)	(4.5%)
(9)	Expected claims ratio	80.9%	80.9%
(10)	Calculated premium savings	$43	$91

NOTE:
(2) from Table 2
(3) from Tables 2 & 3:
scenario A, claims < $10,000: (1,459,138 - 178,854 = 1,280,284)
scenario B, all claims: (6,942,301 - 4,227,172 = 2,715,129)
(4) 100% x (3)/(2)
(5) from IBC letter to Ms. Steeves dated 20 June 1991.
(6) (4) x (5)
(7) from 1989 IBC green book (p.5); operating expense 20.6% + tax 3%
(8) our assumption
(9) 100% - (7) - (8)
(10) (6)/(9)

TABLE 2

ALBERTA BODILY INJURY SURVEY
BREAKDOWN OF JUDGEMENT / SETTLEMENT
CLOSED IN 1990

	All Claims	Claims Under $10,000	Claims Between $10,000 and $75,000	Claims Over $75,000
Loss of Employment Income	$1,009,393	$110,586	$607,999	$290,808
Out of Pocket	$399,569	$53,485	$177,823	$168,261
Non-Pecuniary*	$3,311,926	$1,212,709	$1,618,005	$481,212
Future Employment Income	$1,293,055	$2,300	$95,424	$1,195,331
Future Care	$228,859	$3,500	$19,359	$206,000
Gross-up for Tax	$52,500	$500	$0	$52,000
Fund Management	$15,400	$0	$400	$15,000
Party and Party Costs*	$360,603	$57,863	$183,501	$119,239
Prejudgment Interest	$270,996	$18,195	$133,134	$119,667
Total	$6,942,301	$1,459,138	$2,835,645	$2,647,518
Number of Claims	577	443	124	10

* Note : Party and Party Costs for Claimants Represented by Counsel
Have Been Adjusted if Entered as Zero.

ALBERTA BODILY INJURY SURVEY
BREAKDOWN OF JUDGEMENT / SETTLEMENT
CLOSED IN 1990
With $10,000 Deductible for Non-Pecuniary

	All Claims	Claims Under $10,000	Claims Between $10,000 and $75,000	Claims Over $75,000
Loss of Employment Income	$1,009,393	$110,586	$607,999	$290,808
Out of Pocket	$399,569	$53,485	$177,823	$168,261
Non-Pecuniary*	$932,287	$0	$541,075	$391,212
Future Employment Income	$1,293,055	$2,300	$95,424	$1,195,331
Future Care	$228,859	$3,500	$19,359	$206,000
Gross-up for Tax	$52,500	$500	$0	$52,000
Fund Management	$15,400	$0	$400	$15,000
Party and Party Costs*	$151,226	$5,408	$54,571	$91,247
Prejudgment Interest	$144,882	$3,075	$44,521	$97,286
Total	$4,227,172	$178,854	$1,541,172	$2,507,145
Number of Claims	577	443	124	10

* Note : Party and Party Costs for Claimants Represented by Counsel Have Been Adjusted if Entered as Zero.

APPENDIX 5

ALBERTA AUTOMOBILE INSURANCE
A HISTORICAL REVIEW

Prepared by:

Joe S. Cheng, F.C.I.A.

December 1990

ECKLER PARTNERS
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Alberta Automobile Insurance
A Historical Review

We have studied the Alberta trends in claims and premiums from 1972 to 1989, to see the changes that have occurred, and hence to gain some insight into the prospects for the future.

The number of insured vehicles in Alberta has grown substantially from 487,086 vehicles in 1972 to 1,297,804 in 1989. Premium volume has grown in the same period by more than eight fold, from $66,581,225 in 1972 to $577,038,476 in 1989. The average premium per insured vehicle was $137 in 1972 and $445 in 1989. However, the 225% increase was less than the cost of living increase in Alberta during the same period. Inflation in the period would have increased the cost of living by 257%. Thus, in 1989, the average premium in real dollar terms had actually decreased by 9% when compared against 1972 premiums. Over these years, there has been a general increase in coverage. In 1972, only 67% of insured vehicles carried collision; in 1989, 75% carried collision. In 1972, 34.4% carried comprehensive coverage, 35.4% had specified perils; in 1989, 78.2% carried comprehensive and 9.5% carried specified perils. The increase in coverage together with a decrease in average premium in real dollar terms indicated that Albertans were getting a better deal for their dollar in 1989 than in 1972.

This, however, did not mean that premiums, have been stable over the years. Exhibit I illustrates the actual average premium per vehicle insured, all coverages combined. Between 1972 and 1989 there were two periods where the average premiums increased dramatically: 1974 to 1977 and 1980 to 1983. In the first of these periods, the average premium jumped from $145 in 1974 to $272 in 1977, an increase of 23.4% per annum. While inflation was running at double digits during this period, the inflation adjusted rate of increase was still 13% per annum. Between 1980 and 1983 the rate of increase in average premiums was 15.7%, but the inflation adjusted increase was less than 1%.

Exhibit II depicts the changes in average premium per vehicle in 1989 dollars over the seventeen year period. It can be seen that in standardized dollar terms there have been drastic swings in premiums per vehicle. The highest point was reached in 1977. Since then, there has been a steady decline in real dollar premiums.

In 1989 and 1990 companies have increased premiums in Alberta. This could signal the beginning of another period of double digit rate increases.

Loss costs per vehicle insured are also illustrated in Exhibit I along with the premiums. Two observations can be made about the trend of loss costs in the period. First, there did not seem to be a correlation between premiums and losses though both premiums and losses tended to increase over time. When premiums began to increase, it did not coincide with the changes in loss costs per vehicle. Premiums tended to increase two to three years later than loss costs, and stopped increasing two to three years after loss costs had stop growing. In other words, premium lagged loss costs by two to three years.

Secondly, loss costs were cyclical. There were periods of exponential growth and periods of decline. The periods seemed to coincide with the provincial economic conditions. During periods of economic slow down loss costs were flat or decreasing. During economic recovery, loss costs tended to increase rapidly. The correlation of loss costs on economic conditions is best illustrated by looking at the inflation adjusted loss cost figures in Exhibit II. Measured in 1989 dollars, loss costs decreased during 1974-76 recession and again in the recessions of the early eighties. During the oil boom of the late seventies, loss costs increased by an average of 10% per year. The subsequent fall in loss costs per vehicle was a reflection of the severed recession that occurred in Alberta. The results of the past seventeen years indicated that there was instability in the frequency of insurance claims. There was an inverse relationship between the economy and insurance claims. This cyclical behaviour of loss costs combined with premium increases lagging 2 years behind combined to form the underwriting cycle as illustrated in Exhibit III. The ratio of claims to premiums in automobile insurance is displayed over the seventeen year period. The underwriting cycle had a period of six to eight years with the down cycle lasting longer than the recovery period. During the down leg of the cycle, companies were responding to competitors' pressure to hold rates at inadequate level. During the upturn, competition reduced and companies enjoyed redundant rate levels until competition returned to normal. The cycle was certainly not unique to Alberta automobile insurance, it happened in almost all property and casualty insurance in North America.

The trends for all coverages combined may mask the changes occurring in each coverage. Exhibits IV, V, VI, and VI-A illustrate the claim frequency and the loss costs per vehicle by coverage over the seventeen year period. From these exhibits one can conclude that the same overall pattern existed for all coverages. The periods of increase and decrease tended to match each other in broad terms. However, the driving force behind the changes in total loss costs during the past two underwriting cycles were different.

In the late seventies, it was the physical damage coverages that were increasing at a fast rate. Loss costs for collision went from $60.00 in 1976 to $120 in 1980, comprehensive loss costs went from $25 to $53, third party liability loss costs went from $89 to $137. In the late 1980's, it was third party liability that was driving the upward surge. Loss costs for third party liability went from $130 in 1984 to $215 in 1989. Collision premiums went from $100 to $144 and comprehensive loss costs went from $65 to $85.

What caused this increase in third party liability loss costs can be seen in Exhibit VI and VI-A, which tracks the frequency and severity for third party liability. Since 1982 there has been a steady increase in the average claim size in third party liability. In 1986 the average claim size jumped by over $500 and since has climbed by another $500. During the 1980's, the average claim size for liability has more than doubled.

On the other hand, over the past 17 years the claim frequency for third party liability had decreased in steps, corresponding to the recessions. The decline in frequency has finally abated. In fact, we observed an increase in the more expensive bodily injury claims and a levelling off in property damage claims.

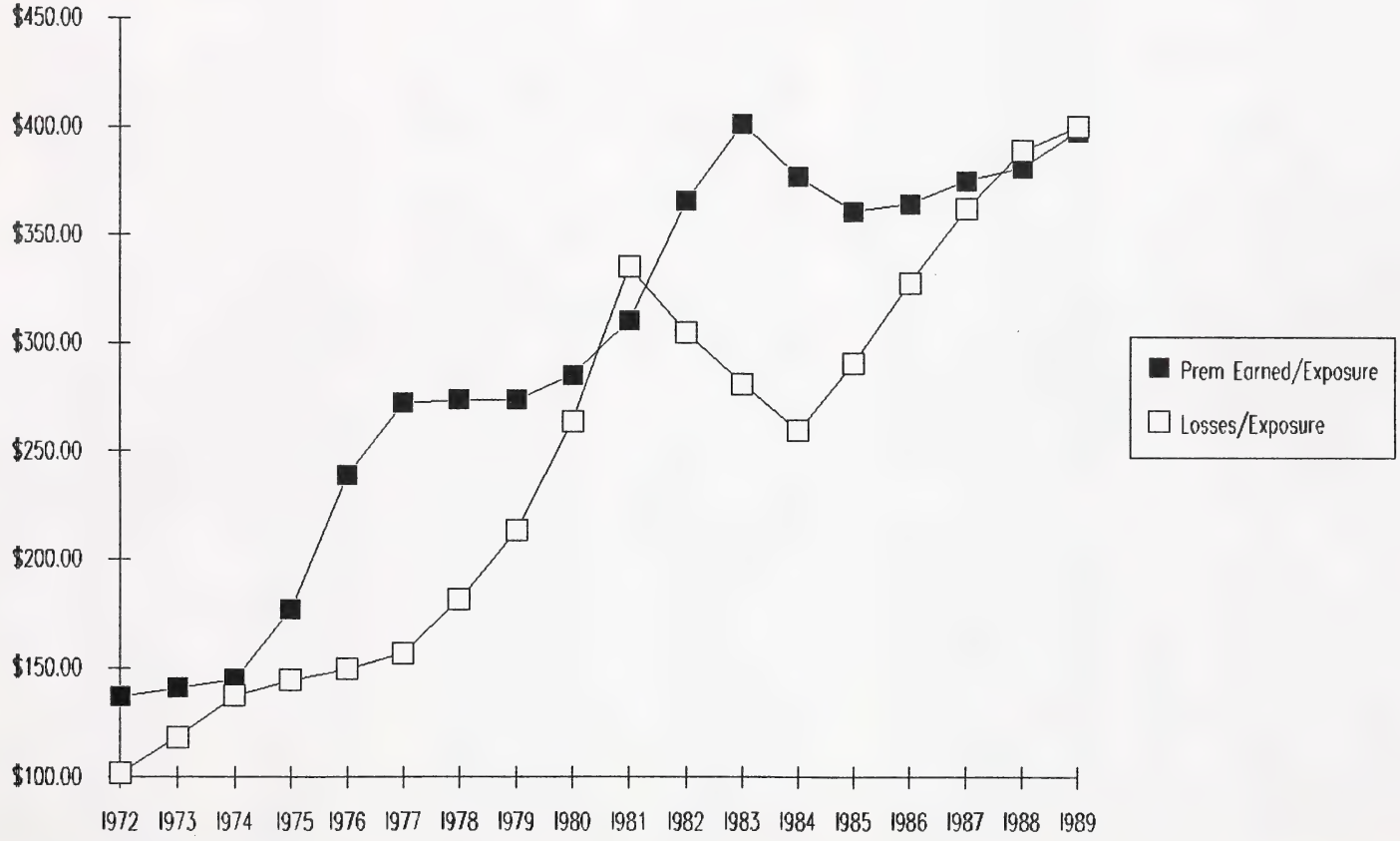
We can only examine the picture since 1982 as earlier data did not split out bodily injury from third party liability. Exhibit VII shows the loss costs for bodily injury, property damage and for the two kinds of loss combined. In 1982, the bodily injury and property damage loss costs were approximately equal; in 1989, the bodily injury loss cost was 63% higher than the property damage loss cost, and the trend in 1989 was for continuing growth in bodily injury loss costs. The cause of this increase in bodily injury loss costs was partly due to the increase in bodily injury frequency. Between 1983 and 1989, frequency had increased by 43 percent (see Exhibit VIII). During the same period property damage frequency had increased only slightly (see Exhibit IX).

Conclusion

Automobile insurance in Alberta is a cyclical business. The claims frequency was closely tied to the economic cycle. There has been a decreasing trend in insurance premium in real dollar terms. Premiums tended to lag behind loss costs by two to three years. The latest increase in claims cost was caused primarily by an increase in bodily injury claims as well as the severity of those claims.

Exhibit I

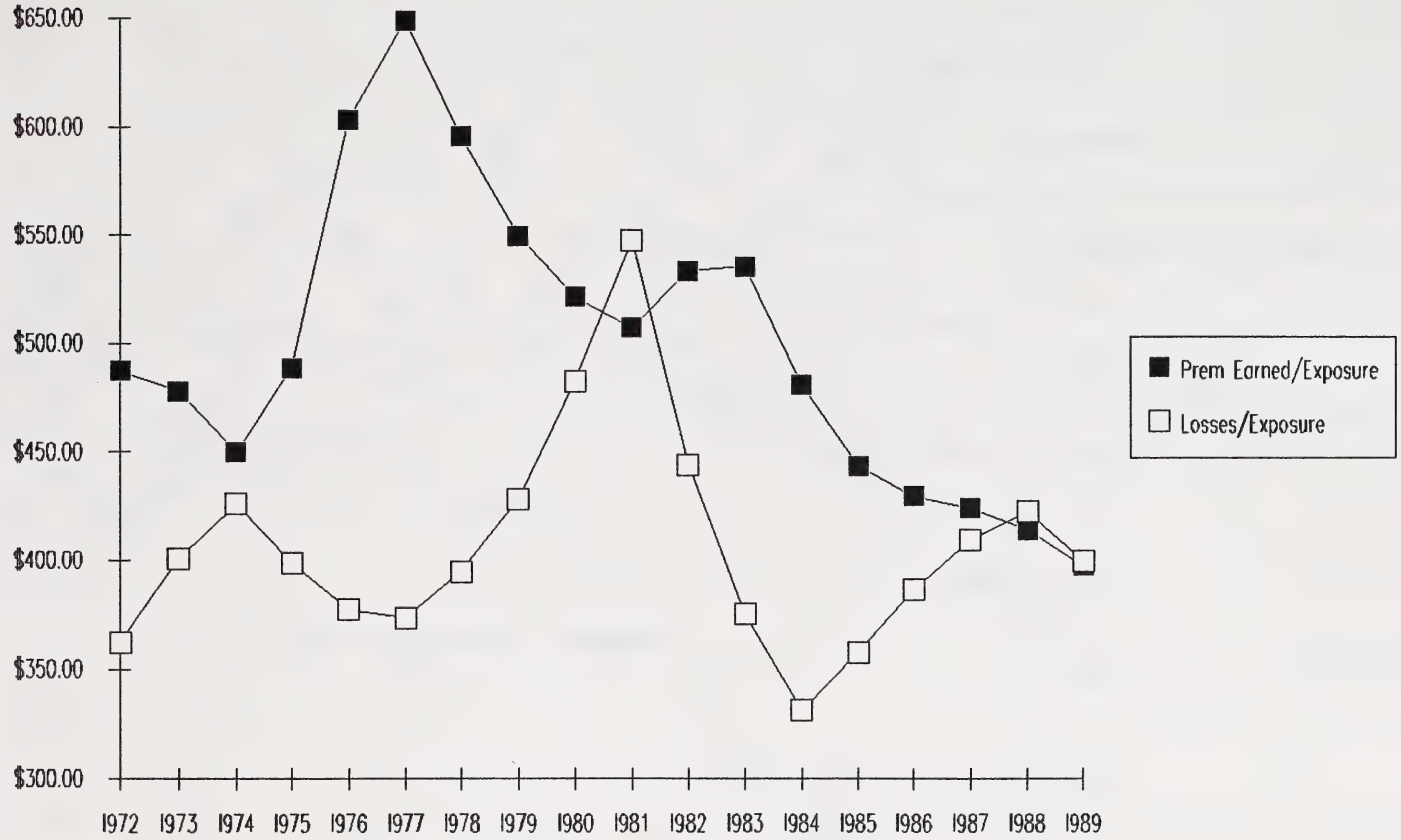
ALL COVERAGES - ALBERTA



Source: IBC Green Book Statistical Data

Exhibit II

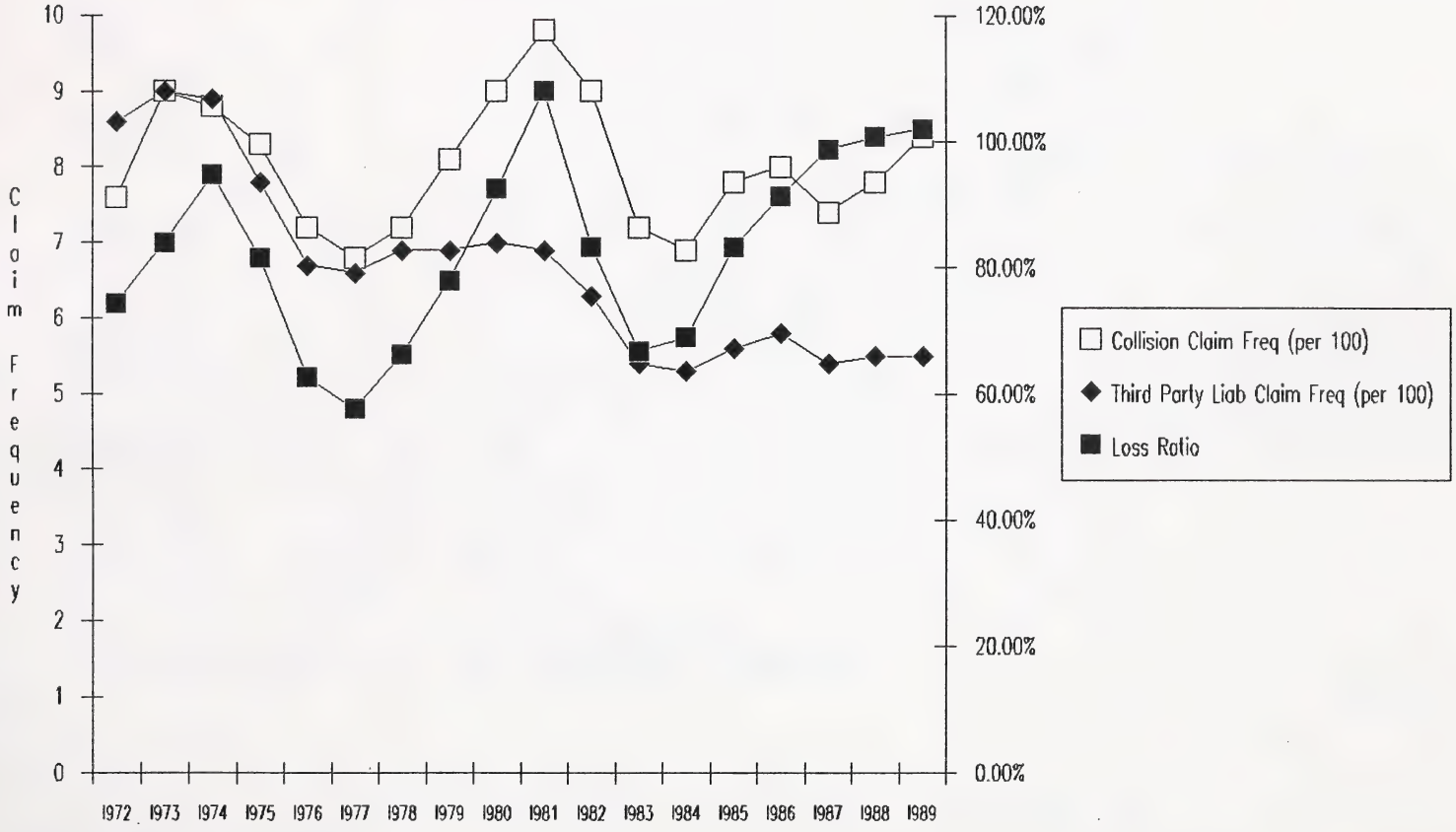
ALL COVERAGES - ALBERTA
(INDEXED)



Source: IBC Green Book Statistical Data

Exhibit III

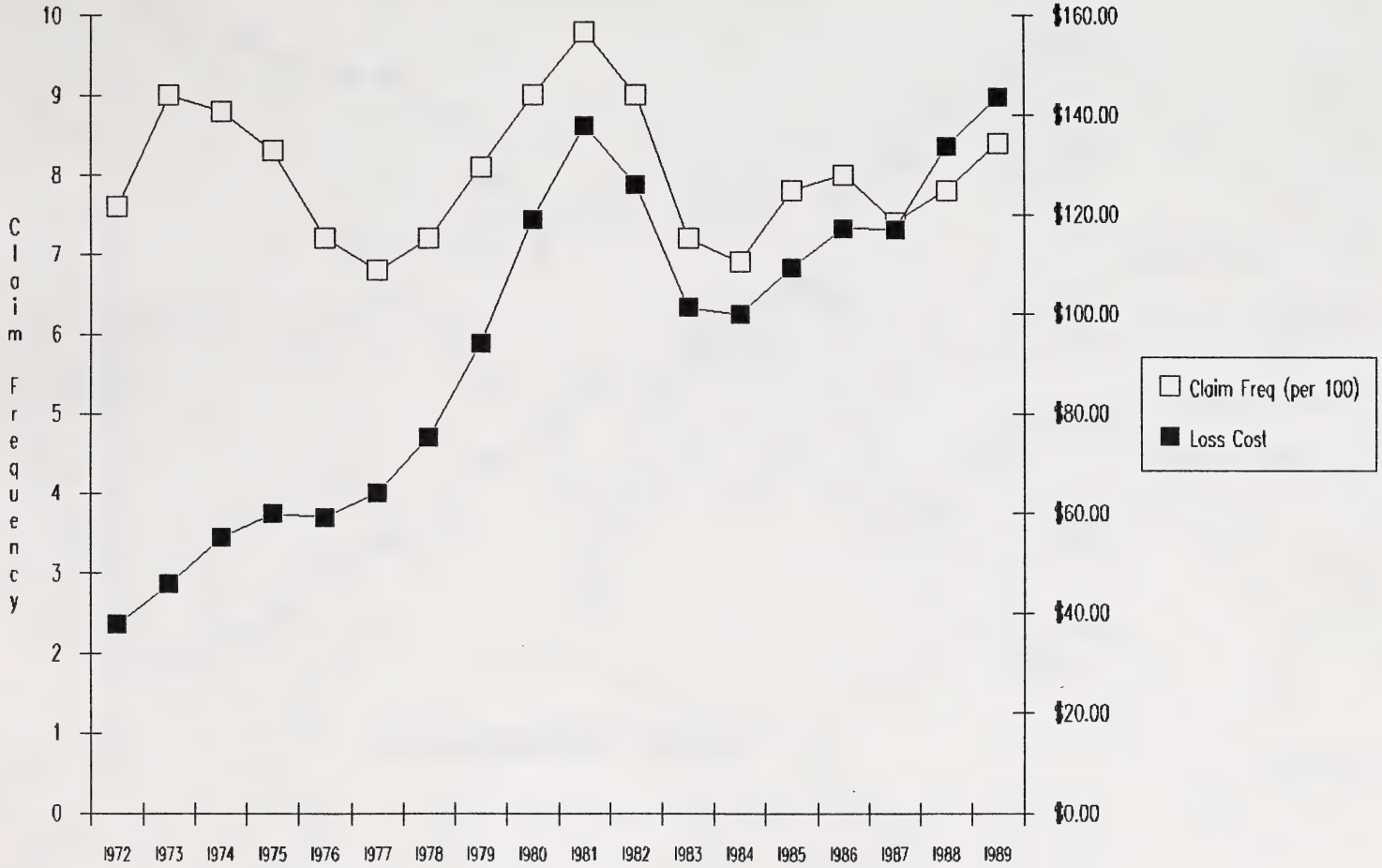
ALL COVERAGES - ALBERTA



Source: IBC Green Book Statistical Data

Exhibit IV

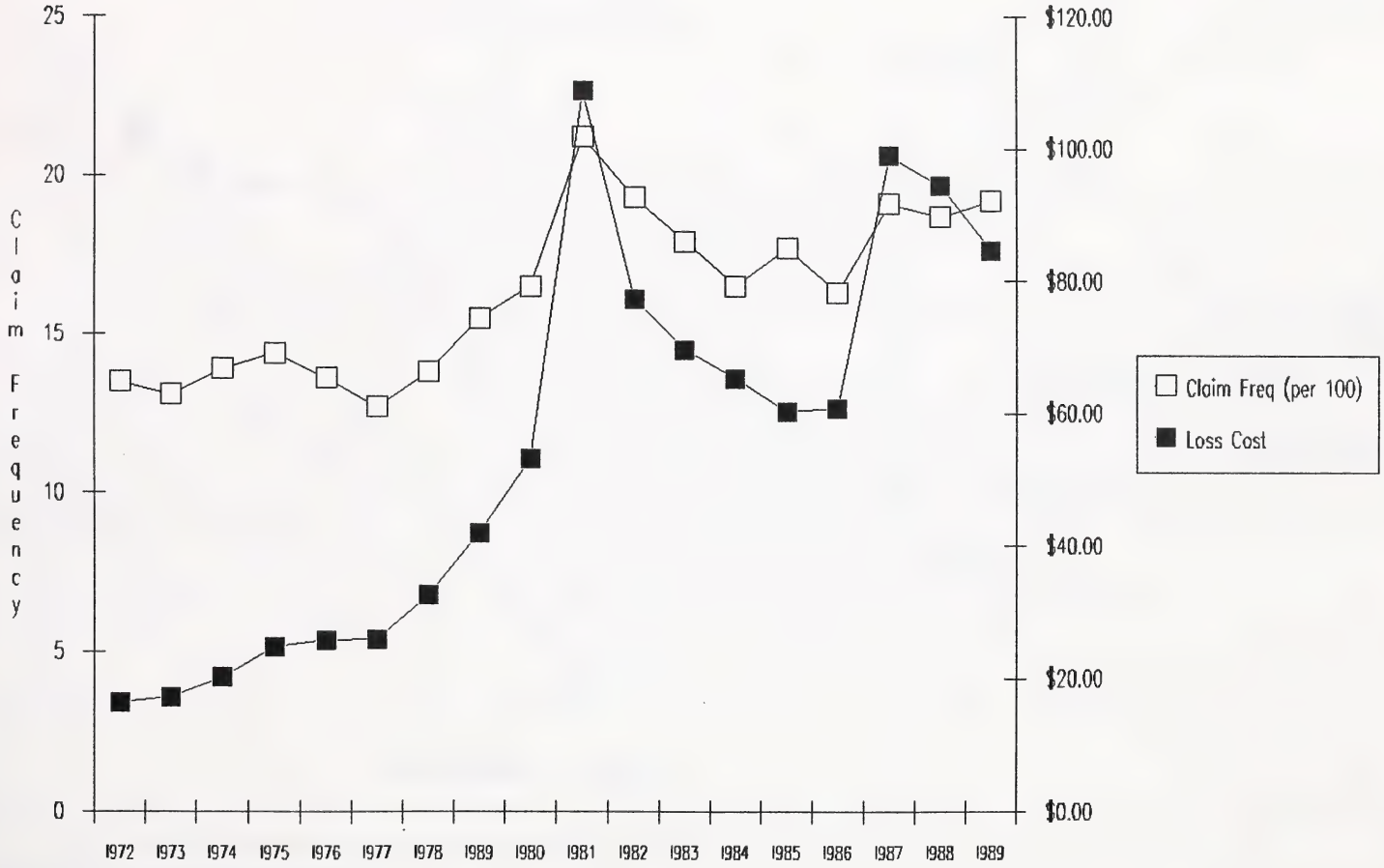
COLLISION - ALBERTA



Source: IBC Green Book Statistical Data

Exhibit V

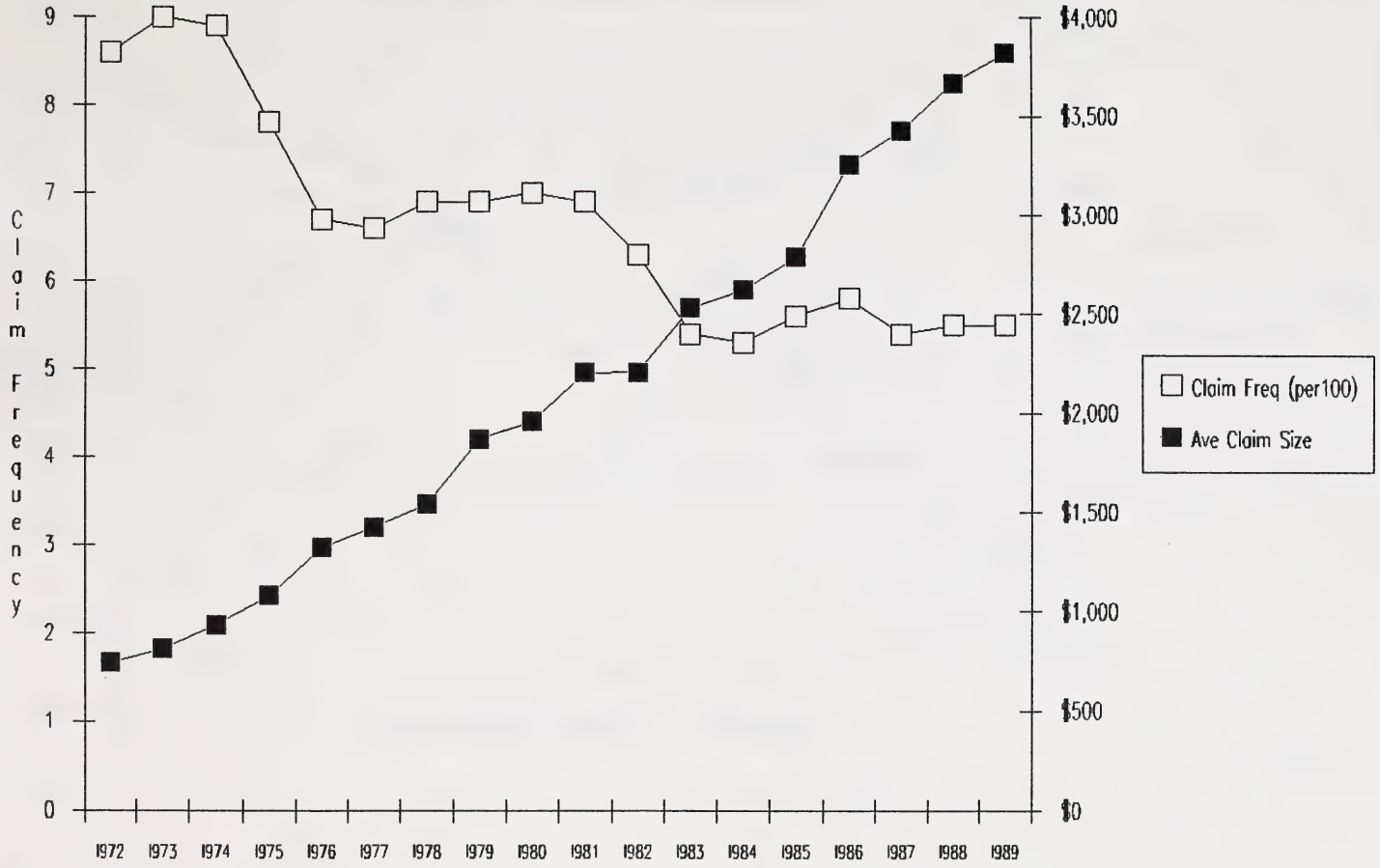
COMPREHENSIVE - ALBERTA



Source: IBC Green Book Statistical Data

Exhibit VI

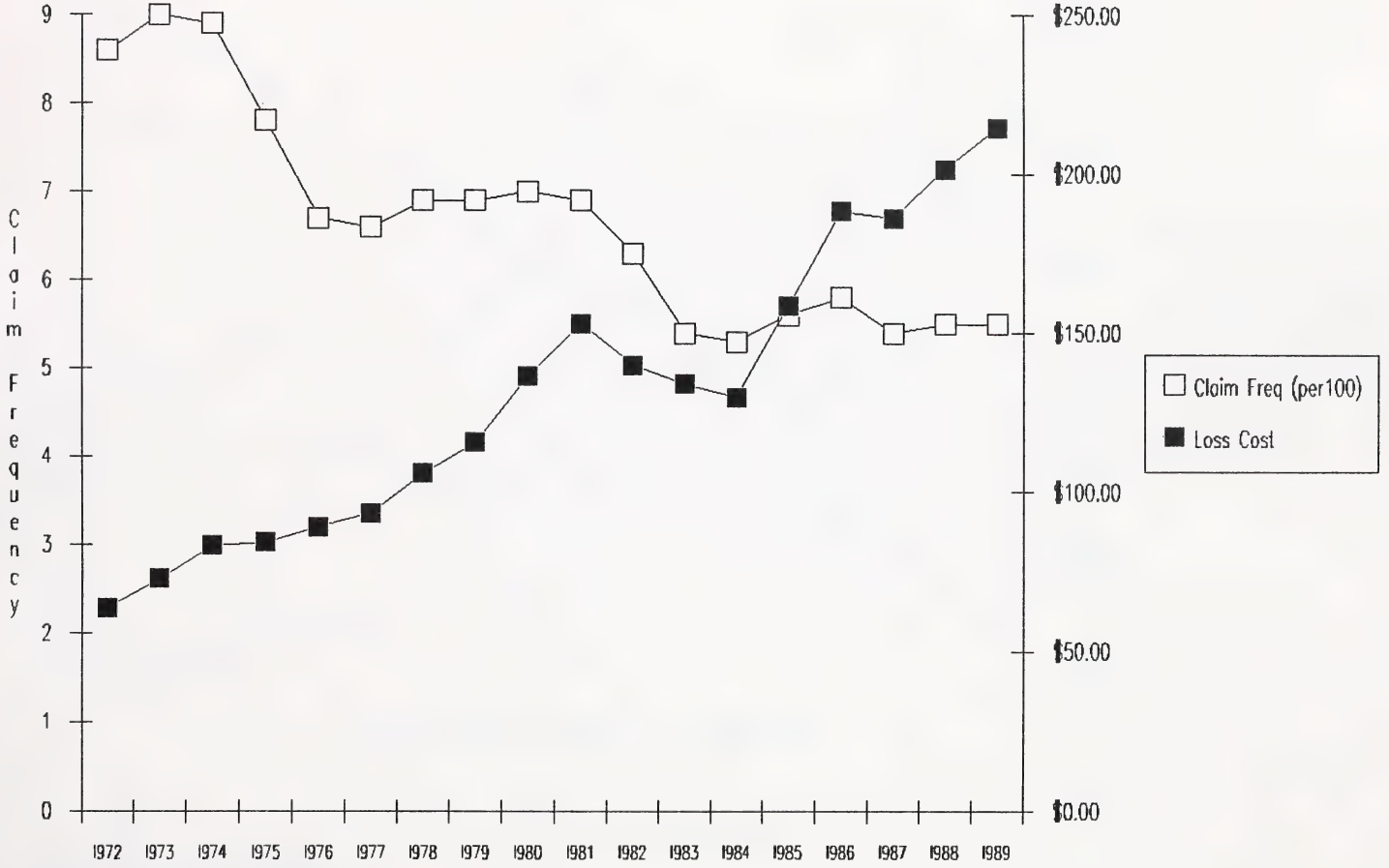
THIRD PARTY LIABILITY - ALBERTA



Source: IBC Green Book Statistical Data

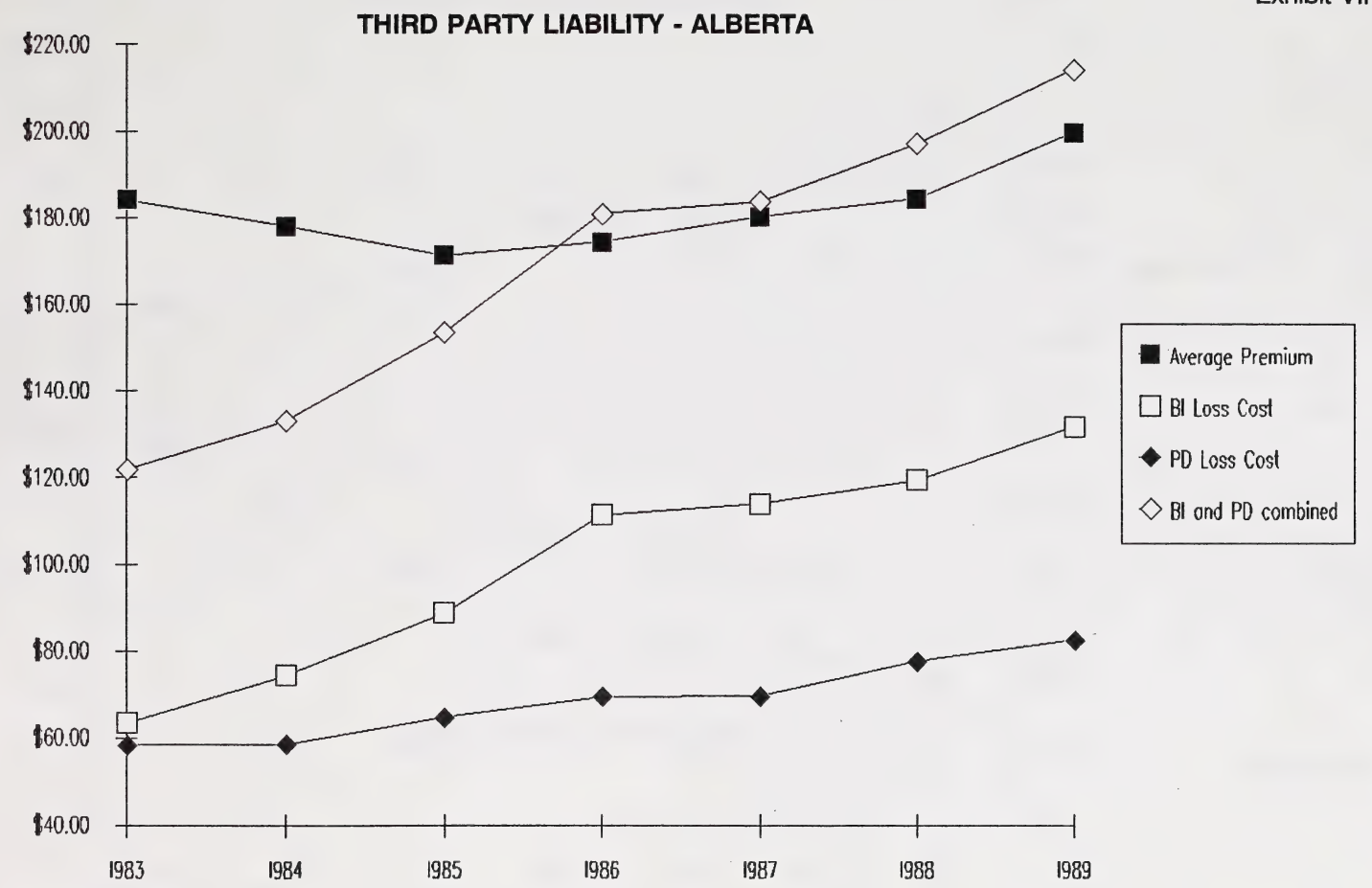
Exhibit VI-A

THIRD PARTY LIABILITY - ALBERTA



Source: IBC Green Book Statistical Data

Exhibit VII



IBC Green Book Statistical Data

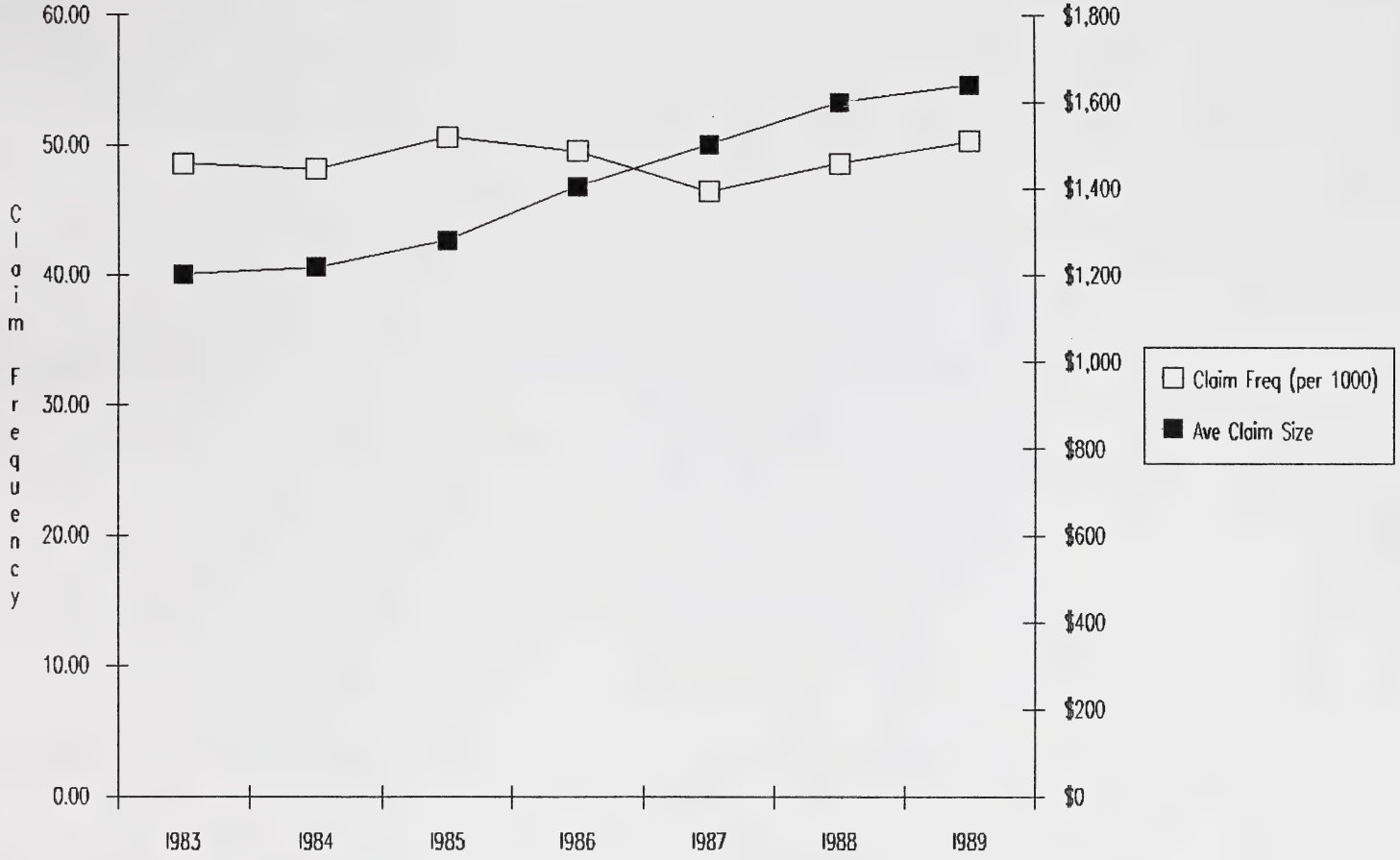
Exhibit VIII

BODILY INJURY - ALBERTA

Source: IBC Green Book Statistical Data

Exhibit IX

PROPERTY DAMAGE - ALBERTA



Source: IBC Green Book Statistical Data

APPENDIX 6

A REVIEW OF OPTIONS FOR REFORM OF THE ALBERTA AUTO ACCIDENT COMPENSATION REGIME

BY

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and

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rev. 30 August 1991

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Michael J. Trebilcock
Bruce Chapman

CHAPTER 1

OPTIONS FOR REFORMING THE ALBERTA AUTO ACCIDENT COMPENSATION REGIME

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I PERSPECTIVES ON ACCIDENT LAW REFORM

In evaluating the efficacy of the present Alberta auto accident compensation regime and alternatives thereto with respect to traffic-related injuries, it is obviously necessary to be clear on the criteria against which they are to be evaluated. Unfortunately, in the case of the tort system, which is a central ingredient of the current regime, controversy begins with this very threshold question. First, there is fundamental disagreement as to what goals the tort system is designed or can be made to serve.[1] Second, even where there is agreement on objectives, there is often controversy or at least profound uncertainty as to what the empirical evidence proves as to how well the tort system achieves those objectives or how much better or worse alternative systems are likely to do in promoting those same objectives.

(a) Deterrence Goals

Law and economics scholars, drawing on concepts of economic efficiency, tend to stress the deterrent objectives of the tort system and to evaluate existing legal doctrine or proposed reforms to it in terms of whether appropriate incentives are created for the various causative contributors to a given negative outcome (such as personal injury) to minimize the sum of accident and avoidance costs by taking cost-justified precautions to reduce the

---

1 See e.g. Trebilcock, "The Future of Tort Law: Mapping the Contours of the Debate", 15 Canadian Bus. L.J. 471 (1989).

likelihood and severity of that outcome.[2] Deterrence theorists are not concerned with compensation of victims as a primary goal of the tort system (a backward-looking perspective), but view compensation rather as the tool by which accident costs are internalized to injurers in cases where cost-justified accident avoidance precautions were not taken. By confronting prospective injurers with the threat of damage awards, forward-looking incentives to take proper levels of care and avoid excessively risky activities are created.

In an economic framework of analysis, the threat of civil liability for victims' losses is assumed to operate much as the threat of a fine does on the behaviour of a prospective wrong-doer. It is assumed that the latter, in choosing a course of conduct, will weigh the expected costs of an accident (the losses for which he or she will be liable if it occurs, multiplied by the probability of it occurring if such a course of conduct is chosen) against the costs of adopting some alternative course of conduct that will avoid, or reduce the probability of, the accident (i.e. accident costs will be weighed against avoidance costs).[3] If the latter costs are less than the former, rational drivers,

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2 See e.g. Steven Shavell, Economic Analysis of Accident Law (1987); A. Mitchell Polinsky, An Introduction to Law and Economics (2nd ed.) (1989); Robert Cooter and Thomas Ulen, Law and Economics (1988), chap. 8: William Landes and Richard Posner, The Economic Structure of Tort Law (1987).

3 See R.A. Posner, Economic Analysis of Law, 3rd ed. (Boston: Little, Brown, 1986) 147-51, and A.M. Polinsky, Introduction to Law and Economics (Boston: Little, Brown, 1983) chapter 6.

confronting this calculus, will avoid the conduct that may lead to an accident and if they fail to do so will be found liable in negligence in a subsequent tort action by the victim. This version of the negligence concept involves, of course, a form of cost-benefit calculus both by the driver and by a court in any subsequent tort action. In theory, a legal regime embodying this calculus should lead to socially efficient forms of driver behaviour on the highways (although not necessarily efficient activity levels, given that the higher incidence of accidents associated with higher activity levels is not considered in the conventional negligence test).

However, while minimizing the sum of accident and avoidance costs is efficient, the risk of confronting a large liability judgment entails costs. Just as accident and avoidance costs are real social costs, so too are the costs (or disutility) associated with risk bearing. If these costs can be reduced by shifting them from more to less risk-averse parties (e.g. insurers), social welfare is enhanced.[4] However, these two forms of efficiency (efficient accident reduction and efficient risk reduction) entail unavoidable trade-offs. To the extent that insurance is not possible or available, the deterrent effects of the civil liability system will be maximized by fully internalizing accident cost to wrong-doers, but the costs (or disutility) associated with risk bearing will also be maximized. To the extent that complete

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[4] See K.S. Abraham, Distributing Risk (New Haven: Yale University Press, 1986) chapter 2.

insurance is available, the costs of risk bearing will be eliminated, but so too will the costs of causing accidents, which will have been partly externalized (at a price) onto others (insurers). Thus, the coexistence of civil liability and third- and first-party liability insurance, or particular combinations of the two, substantially complicates analysis of the deterrent effects of the tort system on driving behaviour.[5]

(b) Distributive Justice Goals

Scholars who adopt a less individualistic, more communitarian perspective on tort law than law and economics (deterrence) theorists tend to view most accidents as the inevitable by-product of the activities (e.g. motoring, manufacturing) which an industrialized, interdependent society has collectively decided to embrace and are sceptical that economic incentives, such as internalization of accident costs through the tort system to least-cost avoiders of them, are likely to have a significant impact on accident-causing behaviour which they view as overwhelmingly the product of momentary acts of inadvertence which the fallibility of the human condition makes us all prey to. Instead, drawing on notions of distributive justice, they stress that accident costs should be collectively, not individually, borne, that financial

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5 See, generally, M.J. Trebilcock, "Incentive Issues in the Design of No-Fault Compensation Systems" (1989) 39 University of Toronto Law Journal 19; M.J. Trebilcock, "The Social Insurance-Deterrence Dilemma of Modern North American Tort Law: A Canadian Perspective on the Liability Insurance Crisis" (1987) 24 San Diego Law Review 929.

necessity is financial necessity, whatever the nature or cause of the misfortune that produces this states, and that requirements of horizontal equity require that all persons similarly financially impacted should be similarly treated. Thus, the tort system and its alternatives should be evaluated against their capacity to spread risk and provide meaningful compensation or insurance expeditiously and at low cost to the victims of these activities so as to minimize the financial impact of accidents on victims' lives and to facilitate rapid and effective rehabilitation.[6] Within this perspective, two competing models of appropriate levels of compensation have often been advanced: the "social assistance model" (a welfare or subsistence floor), and the more generous "social insurance model" (an income-continuity guarantee).

(c) Corrective Justice Goals

More classical tort scholars, drawing on theories of corrective justice, stress notions of individual responsibility, like law and economics scholars. However, they see the purpose of tort law not as the deterrence of prospective wrong-doers but rather as imposing on a person whose morally culpable behaviour

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6 See e.g. Sugarman, "Doing Away with Tort Law", 73 Calif. L. Rev. 558 (1985);Sugarman, Doing Away with Personal Injury Law (1989); H.J Glasbeek and R.A. Hasson, "Fault - the Great Hoax", in Lewis Klar (ed), Studies in Canadian Tort Law (1977); Terence G. Ison, The Forensic Lottery (1967); Abel, R., "The Real Tort Crisis - Too Few Claims" 68 Ohio State L.J. 443 (1987); Hutchinson, "Beyond No-Fault", (1985) 73 Calif. L.R. 755; Royal Commission Report, Compensation for Personal Injury in New Zealand (Wellington, 1967) (the Woodhouse Report).

(intentional or negligent wrong-doing) has violated the equal individual autonomy of another an obligation to restore the latter as nearly as possible to his or her pre-interaction status.[7] Corrective justice seeks to correct past injustices, not to deter future behaviour of other potential wrongdoers or to compensate victims of misfortune whose misfortune is not directly caused by the morally culpable conduct of another. Where such conduct is the cause of another's misfortune, corrective justice would seem to require that all losses suffered as a result of that conduct be redressed in so far as money is able to do this.

Corrective justice (or autonomy) theorists emphasize that the form of tort law is inconsistent with general deterrence or redistributive justice objectives. Tort law typically involves a suit by a victim against an injurer where the nature of the interaction between the two has produced a negative impact on the plaintiff. If deterrence objectives were the central focus of tort law, it may be the case that there are any number of other causal agents of the outcome whose suppression may more fully advance deterrence objectives (e.g. in the case of a highway accident, the failure of highway designers to install a low-cost protective device), but the form of the action precludes an investigation of whether penalizing the injurer or addressing these other causal agents is likely to yield the highest deterrence returns.

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[7] See e.g. Weinrib, "Toward a Moral Theory of Negligence Law", 2 Law and Philosophy 37 (1983); Weinrib, "Liberty, Community, and Corrective Justice", 1 Canadian Journal of Law and Jurisprudence 3 (1988); Weinrib, "Understanding Tort Law", 23 Valparaiso L. Rev. 485 (1989).

Moreover, the form of a tort action for personal injury requires that an injury to one person has actually occurred as the result of the conduct of another. If general deterrence objectives were the central focus of tort law, why wait for a dead or maimed body before attempting to deter accident-prone behaviour? For example, more clearly deterrence-driven legal regimes such as criminal sanctions for speeding or drunk driving attempt to interdict accident-prone behaviour before it causes accidents.

Similarly, corrective justice theorists argue that the form of a tort action is inconsistent with redistributive justice objectives. Why single out the party most immediately interacting with the plaintiff for liability, regardless of the quality of his conduct, on the grounds that he is a better risk-spreader or has a deeper pocket than the victim, when countless other people or institutions who are not parties to the action may be even better risk-spreaders or have even deeper pockets than the defendant? In other words, tort law is inherently incapable of promoting any patterned or coherent principle of distributive justice and should not be assigned this goal.

While this description of the three major normative perspectives on the goals of tort law obscures important differences of viewpoint among scholars, policy-makers, and judges who espouse one or the other of these three general perspectives on accident law, and thus risks misstating the implications of each perspective, it suggests the general lines of empirical enquiry that must be pursued in evaluating given policy options from each

of these perspectives.

II EVALUATIVE CRITERIA

(a) Deterrence/Prevention

With respect to deterrence/prevention considerations, we can ask of both the current Alberta regime and alternatives to it: how well are they likely to deter or prevent traffic accidents?

(b) Compensation - The Victim Coverage Perspective

With respect to compensation considerations, viewed from the perspective of traffic accident victims, we can ask: what percentage of traffic accident victims are compensated through the tort system and how adequately; also, how many victims of auto accidents obtain compensation from other sources and how adequately?

(c) Compensation - The Cost Internalization Perspective

The corrective justice perspective on tort law would require that the costs of accidents be internalized to wrongdoers. However, this creates a tension with the compensation goal from the perspective of traffic accident victims in cases where there are no wrongdoers or the victims themselves are negligent and therefore disentitled to compensation from any third party. Nevertheless, even where cost internalization to wrongdoers as the basis of the compensation regime is rejected, we can still ask whether alternative auto compensation regimes internalize the costs of

traffic accidents to driving activities generally, or externalize some of the costs to non-auto related public programmes, such as the health care system, or to members of society irrespective of their participation in driving activity. Even where an automobile compensation regime internalizes the costs of traffic accidents to driving activities generally, a further question might be asked: even in the absence of a civil liability system reflecting corrective justice values, does the pricing of financial contributions to the system through insurance premiums or other levies reflect a serious attempt to assign traffic accident costs to individual drivers or classes of drivers by reference to their relative causal contributions to these costs?

(d) Operational Efficiency

Here we can ask of both the existing regime and alternatives to it, relative to one another: how well does each achieve any of the foregoing three objectives in terms of (i) minimizing the private and social transaction and administrative costs entailed, and (ii) minimizing the time delays entailed in delivering compensation to victims?

(e) Premium Costs

In assessing the current Alberta regime and possible alternatives to it, we can ask the question: what are the likely premium implications for motorists for any given regime relative to the others?

In applying these evaluative criteria to the current regime and alternatives to it, it is important to stress the importance of a total systems analysis, recognizing that on the compensation side, in addition to the tort system, there are various forms of private and social insurance coverage for accident costs, and that on the deterrence side, in addition to the incentive effects of the tort system, there are a variety of regulatory and public enforcement policies that bear on the frequency and severity of traffic accidents.

It should also be noted that while criteria (d) and (e) do not necessarily reflect major divergences amongst the three major normative perspectives on accident law sketched in Section I of this chapter, the weight to be attached to criteria (a), (b), and (c) will vary significantly from one perspective to another, reflecting the fundamental differences in values and goals inherent in these perspectives.

III THE OPTIONS

(a) The Status Quo - Alberta

In developing our evaluation, we propose to proceed as follows. First, we will describe and evaluate the current Alberta regime, viewing it as a regime that has a maximum tort component, a relatively minimal no-fault component, and is embedded in surrounding private and social compensation schemes and surrounding regulatory and public enforcement policies. Having described the current regime, we then propose to evaluate it, as a total system,

against the five criteria enumerated above.

(b) Regulatory and Public Enforcement Reforms

Our strategy is then to look at a variety of regulatory and public enforcement reforms that might be contemplated that are designed to reduce the accident rate e.g. stronger sanctions and more vigorous enforcement activity with respect to drunk driving; more effective enforcement of mandatory seatbelt laws; more effective license suspension regimes; raising the drinking or driving age; probationary licenses; curfew conditions attaching to licenses for young drivers. Given this set of reform options, it is assumed that all other aspects of the current Alberta regime remain unchanged.

(c) Tort Reform

Our next reform option is to graft onto the current Alberta regime, in addition to these possible regulatory and public enforcement reforms, various tort reforms that are primarily designed to reduce the severity of accident costs e.g. abolition of the collateral benefits rule; mandatory structured settlements; reduction of awards for non-pecuniary losses; reduction of pre-judgment interest; the adoption of a standard discount rate; and the reduction of third party claims by relatives etc.

(d) Enhanced Add-On No-Fault

With both these regulatory and public enforcement reforms and

tort reforms assumed, the next option we examine is an enhanced add-on no-fault system, modelled on the proposals recently advanced by the Ontario Osborne Commission, where the current Alberta Schedule B no-fault accident benefits would be substantially enriched, but the right of traffic accident victims to sue wrongdoers is not curtailed beyond the restrictions on damage recoveries envisaged in the tort reform package referred to above and subject to subtraction of no-fault benefits from awards against third parties. As with the other options, this option will be evaluated against the five criteria enumerated above.

(e) Threshold No-Fault

The next option we will examine is what is commonly referred to as threshold no-fault where below some monetary or verbal threshold (e.g. serious and permanent physical impairment), traffic accident victims are not permitted to sue wrongdoers in tort law but are remitted to whatever private and social insurance sources of compensation may be available to them and more particularly to a schedule of enhanced first-party no-fault benefits (relative to the current Schedule B benefits). Beyond the threshold, we assume that the tort reforms noted above have been adopted, as well as the regulatory and public enforcement reforms, also noted above. The model we adopt as exemplary of this regime is the recently enacted Ontario no-fault scheme supplemented by references to the longer-standing Michigan scheme from which the Ontario scheme to some extent derives. This option will again be evaluated against the

five criteria enumerated above.

(f) Pure No-Fault

The next option we propose to examine is a pure no-fault option where the right to sue in tort law is foreclosed to all traffic victims with respect to personal injuries, with victims restricted to a schedule of enhanced first party no-fault benefits. The model we adopt as exemplary of this option is the no-fault regime in place in Quebec. Obviously, with respect to this option the tort reform package referred to above is irrelevant, although the regulatory and public enforcement reform package can still be assumed. This option will be evaluated against the same set of criteria as the other options.

(g) Elective No-Fault

The final option we propose to examine is so-called elective no-fault as elaborated by the leading U.S. proponent of no-fault compensation schemes, Professor Jeffrey O'Connell of the University of Virginia Law School.[8] Under this option motorists can elect, in taking out automobile insurance, whether to retain their tort rights and purchase third party liability insurance, or forego their tort rights and purchase first party no-fault insurance. Such a scheme obviously has to deal with the problem of accidents between motorists who have made opposing elections. Because such

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[8] See O'Connell and Joost, "Giving Motorists a Choice Between Fault and No-Fault Insurance", (1986) 72 Virginia L. Rev. 61.

a scheme has not been implemented in full-blown form in any jurisdiction, the empirical evidence available for assessing the scheme against our five evaluative criteria is much more fragmentary than with respect to the other options. Nevertheless, some a priori observations can be ventured as to how such a system would be likely to work in terms of our criteria. Again, in making this evaluation, we can assume both the tort reform package and the regulatory and public enforcement reform package noted above.

IV A COMPOSITE EVALUATION OF THE OPTIONS

In the final section of this study, we attempt to draw together in various matrices organized under each of our evaluative criteria how the various options appear to rank, and then to construct a composite evaluative matrix, with appropriate interpretative commentary. It will come as no surprise that given the fundamental differences in philosophical perspectives on the tort system and alternatives thereto described above, and reflected in our set of evaluative criteria, no single option ranks best on all criteria. Thus, inevitably, social and political choices are entailed as how to weight these various criteria in choosing amongst the various options.

CHAPTER 2

THE STATUS QUO IN ALBERTA: MAXIMUM TORT AND MINIMUM NO-FAULT

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I DESCRIPTION OF THE CURRENT SYSTEM IN ALBERTA

In Alberta automobile accidents are governed by the general tort principles of common law with some statutory modifications. In addition to this, there is a scheme of modest no-faults benefits as provided under the Insurance Act.[1] It is this combination to which we refer when we describe the Alberta system for accidents as a maximum tort, minimum no-fault scheme.

(a) Tort Law

Liability in tort rests on the notion of 'fault'. In order to be compensated by tort law, one must prove that injury or loss was caused wholly or partly by the fault of another. Fault is measured by the objective standard of reasonable care. Thus, if a motorist's conduct falls below the standard of reasonable care that the law requires - if in other words the motorist is negligent - a court will order the motorist to compensate the victim for any losses or damages.

Tort law also seeks to reimburse the accident victims for all the damages they have suffered. The basic principle for the measure of damages in tort is that the injured person should receive that sum of money which will as nearly as possible restore the victim to the position he or she was in before the accident occurred. Thus, innocent victims of motor vehicle accidents will receive damages from a court not only for their pecuniary losses but also for their non-pecuniary losses. Pecuniary losses include loss of earnings, and medical and

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1 R.S.A. 1980, c.I-5, ss. 312-313

rehabilitation expenses. Non-pecuniary losses are largely related to what is known as pain and suffering, or to loss of enjoyment of life attributable to the injury.

Each of these twin principles of tort law liability, namely that the defendants liability is based on fault and that the plaintiff recovers in full for pecuniary as well as non-pecuniary losses, have been subject to a range of developments in tort law, some of them statutory. For example, out of concern for ensuring both the defendant's liability and the plaintiff's recovery, the law in Alberta makes it compulsory for every motorist to have minimum insurance coverage of $200,000 for the risk of causing either personal injury or property damage to third parties by the negligent use or operation of a motor vehicle. This fault based insurance was made mandatory in Alberta in 1975.[2]

Where the plaintiff's injuries are fatal, the damages that can be claimed by his or her estate are also governed by legislation. This is because without specific legislation, there is no survival of action following death at common law. In Alberta, damage recovery is governed by the Fatal Accidents Act.[3] The court must assess the amount of capital necessary to produce a monthly sum equivalent to that which would assure the dependents the comforts and station in life that they would have enjoyed but for the death of the deceased. While Alberta does allow in this way for the recovery of pecuniary losses suffered

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2 Ibid, at Pt. 7

3 R.S.A. 1980 c. F-5

by family members, Alberta differs from other Canadian provinces in that there is no statutory authority in Alberta for a claim of loss of guidance, care and companionship; for this the plaintiff family members are left to their common law remedies. In addition, pursuant to the Alberta legislation, conventional damages can be awarded for bereavement without evidence of damages.[4] The sum of $3,000 is awarded to the spouse of a deceased person, to the parents of a deceased child (to be divided equally between them), and to the minor child or children of the deceased (to be divided equally between them). The total award possible is $9,000.

In the case of non-fatal accidents, a victim's recovery for non-pecuniary losses such as pain and suffering, and loss of amenities and loss of expectation of life, are governed by the general principles established by the Supreme Court of Canada in a trilogy of cases.[5] A rough upper limit of $100,000 damages was established in 1978 for the most serious injuries for pain and suffering, loss of amenities and enjoyment of life, and loss of expectation of life. It has now been accepted by the courts that this $100,000 ceiling should be adjusted for inflation so that the current ceiling on damage awards is now around $200,000.[6]

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4 Ibid, at s.8

5 Andrews v. Grand & Toy Alta Ltd., [1978] 2 S.C.R. 229; Thornton v. Board of School Trustees of School District No 57 et.al. [1978] 2 S.C.R. 267; and Arnold v. Teno, [1978] 2 S.C.R. 287

6 Lindal v. Lindal, [1981] 2 S.C.R. 629

The $100,000 limit on non-pecuniary losses, it should be stressed, acts as a ceiling, not as a scale. The most severe injuries are not set at $100,000 and all other losses injuries scaled down comparatively. Instead, the $100,000 award acts as a cap on damages which many serious injuries of varying degrees of devastation may reach.

In Alberta, legislation also provides that where a person obtains a judgment for payment of money or a judgment that money is owing, the court is to award interest from the date the cause of action arose to the date of judgment.[7] In Alberta, there is no award of interest on interest (i.e. interest is not compounded).[8] Interest awarded on non-pecuniary damages in Alberta is calculated at the rate of 4% per year, while interest on pecuniary losses is awarded at a market rate of interest.[9] Alberta is the only province which currently makes this distinction between pecuniary and non-pecuniary loss in awarding pre-judgment interest. The reason for making this distinction is that the value of non-pecuniary damages is assessed at the time of the order by the judge or jury, not at the time of the accident. That is to say, non-pecuniary damages are assessed in current dollars, eg. in 1990 a $200,000 cap applies rather than the 1978 $100,000 cap. It is, therefore, arguable that to award prejudgment interest on non-pecuniary damages at a nominal market

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7 Judgment Interest Act, S.A. 1984, c.J-0.5

8 Ibid, s.2

9 Ibid, s.4

rate of interest would over compensate the plaintiff since the nominal rate of interest also includes an inflation component.

Until recently, it was well established in common law that an award for damages will not normally be reduced where the plaintiff has recovered benefits from some alternative collateral source.[10] A recent Supreme Court of Canada case, however, may have altered this general rule, although the scope of the case has yet to be determined.[11] The issue at stake is whether a plaintiff should be able to recover special damages for health care services that, in most Canadian provinces, he or she has not paid for and that he or she is under no obligation to pay for. Under Alberta legislation, the person is required to claim for special damages for issued services and the Minister of Health is subrogated to this right of recovery. In a slightly different collateral source context, payments received as pension benefits or under disability insurance or unemployment insurance plans are not deducted from damage awards because to do so would, arguably, unjustifiably benefit the defendant. Payments to the deceased's dependents under an insurance policy are not considered in assessing the damages payable on the deceased's death. Payments under the Canada Pension Plan are, however, deducted from the award.

Finally, something should be said about the tax treatment of tort awards since so much tort reform ultimately relates to this

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10 See, e.g. Boarelli v. Flanagan, [1973] 3 O.R. 69

11 Ratych v. Bloomer (1990), 73 O.R. (2d) 385

decision. In Canada, compensation for non-fatal injuries is based on the before-tax loss of income, and the award itself is tax exempt. An award of damages is in the form of a lump sum payment by the defendant to the plaintiff. Unless authorised by statute, no order for periodic payments may be made. The plaintiff receives immediately a capital sum representing the present value of lost income and the cost of future care. Typically, this sum is invested to earn interest to makeup for what has been lost. While the award itself is tax free, any subsequent interest income earned on the award is taxable in the plaintiff's hands. If the plaintiff is to be compensated fully for all the costs of future care, and if the fund created for this purpose is to be adequate, it must take into account any tax consequences. This exercise of taking into account the impact of taxation is referred to as "grossing up" for taxes.[12] The theory of "grossing up"is that there should be an additional sum awarded to compensate for the tax that will accrue on the interest portion of the award.

(b) No-fault Benefits Under the Current Scheme

In addition to the tort benefits described above, the victims of a motor vehicle accident in Alberta may receive compensation in another way. If the victim has automobile insurance, he is entitled to claim against his own insurer for

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12 The general appropriateness of "grossing up" has now been recognized by the Supreme Court of Canada. See Watkins v. Olafson, [1989] 6 W.W.R. 481

certain accident, medical, death, or income replacement benefits irrespective of his responsibility or fault for the accident. These benefits are commonly referred to as "first party", "no-fault", or "Section B" benefits. This form of no-fault coverage was made compulsory by law in Alberta in 1975 and the current scheme is laid out in the Insurance Act at ss. 312 and 313. Section 313 (2) states that the insurer shall pay death benefits on the death of the insured person based on the age and status of the deceased person at the date of the accident in accordance with the following chart:

STATUS OF DECEASED AT DATE OF ACCIDENT

Age of Deceased at Date of Accident	Head of Household	Spouse in two Parent Household	Dependent Relative
Up to age 4 years	$000	$000	$500
5 to 9 years	000	000	1000
10 to 17 years	5000	5000	1500
18 to 64 years	5000	5000	1000
65 to 69	5000	5000	1000
70 years and over	5000	5000	500

In addition, if the principal income earner of the household dies, the death benefit of the insured increases $1000 for each dependent survivor beyond the first, plus 1% of the principal sum per week for 104 weeks. The insurer must also pay actual funeral costs up to a maximum of $1,000 in respect of the death of each of the insured persons.

In the event of total disability of an insured person, the insurer shall pay, after a seven day waiting period, a weekly benefit of 80% of gross weekly earnings to a maximum of $150 per week and a minimum of $50 per week, for a maximum period of 104 weeks or until the injury ceases to be a total disability. Where an insured successfully sues a wrongdoer for damages, the value of the Schedule B benefits which are actually received are subtracted from the award.

II EVALUATION OF THE CURRENT SYSTEM

As might be expected, the evaluation of the status quo system for dealing with motor vehicle accidents in Alberta varies according to which of the different goals one adopts as primary for an assessment of such a system. The following discussion attends to each of the five possible goals for assessing an accident law system that were outlined in chapter 1.

(a) Deterrence and Prevention

What are the possible affects of a maximum tort, minimal no-fault scheme on the incentives for accident reduction? One view is that tort liability, even standing alone, will probably have few major incentive affects, and none once third party insurance is introduced.[13] This implies that any movement toward a first party no-fault system is unlikely to reduce safety in any way. Such a view turns largely on perceptions about the nature of

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13 These arguments are summarized in M. Friedland, M. Trebilcock and K. Roach, Regulating Traffic Safety (Toronto: Univ. of Toronto Press 1990), at p 71

errors involved in most automobile accidents. A 1970 study by the U.S. Department of Transportation concluded that the vast majority of accidents involved drivers who, over their lifetime, will be involved in no more than a handful of reported accidents.[14] Thus, the study found that it was fallacious to think that the drivers who cause most accidents form a small identifiable group which is guilty of hazardous driving, which is vastly over represented in accident statistics, and which is responsible, therefore, for the "accident problem". Rather the study suggests most drivers are "guilty" of driver error. A certain magnitude of driver error is representative of the behaviour of the general average of drivers, and must be considered as normal, even though such behaviour departs from "standard", "correct", or "ideal" behaviour or involves "fault" in the sense described in tort law. One study has estimated that an average driver makes 200 observations per mile, 20 decisions per mile, and one error every two miles. Those errors result in a near-collision once every 500 miles, a collision once every 61,000 miles, a personal injury to some individual once every 530,000 miles, and a fatal accident once every 16 million miles.[15]

However, if this view is asserted in its extreme form, it

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14 U.S. Department of Transportation, Driver Behaviour and Accident Investment: Implications for Tort Liability (1970)

15 Norman, Road Traffic Accidents - Epidemiology, Control and Prevention, World Health Organization, Public Health Papers No. 12, 1962, at 51.

would mean that not only civil sanctions, but also criminal and administrative sanctions as well, are likely to prove futile in deterring accidents. Driver error would simply be an inevitable manifestation of inherent human fallibility. A similar argument is sometimes made that conduct on the highway that is dangerous to others is also typically dangerous to oneself, and no one wants to injure himself or herself. Thus, civil (and presumably other) sanctions add nothing to this desire for physical self-preservation. Again, if this argument were true, it would make all sanction regimes for driving conduct futile. But some drivers are likely in fact to be less diligent than others in assessing these physical risks; and some drivers may have a stronger taste for risks than others. In these cases, sanctions, including civil sanctions that raise the cost of risk-taking, must surely affect behaviour.[16]

Also, even in the presence of liability insurance, to the extent that accident rates are a function of activity or exposure levels (i.e. number of miles driven), as several empirical studies find,[17] and to the extent that insurance premium levels geared to exposure levels reduce driving activity, the levels of accident rates are likely to fall. In this respect premiums would

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16 See supra n.13, at 72

17 S. Partyka, "Simple Models of Fatality Trends Using Employment and Population Data (1984) 16 Accident Analysis and Prevention 211; and J. Hedlund, R. Arnold, E. Cerrelli, S. Partyka, P. Hoxie, and D. Skinner, "An Assessment of the 1982 Traffic Fatality Decrease", (1984) 16 Accident Analysis and Prevention 247

ideally be geared to distance driven and the driving conditions in which those distances are driven (urban, rural, business or leisure). Territorial classifications and business-leisure driving distinctions are able to capture (albeit crudely) some of the qualitative aspects of exposure levels, but distance driven is difficult and expensive to predict and monitor, and is typically not employed as a primary rating variable. However, age and sex as rating variables also function as crude proxies for both quantitative and qualitative aspects of exposure levels. For example, young men as a class drive more miles and engage in more seriously risky behaviour than young women, and both groups are substantially overrepresented in accident statistics relative to the adult population at large.[18]

Moreover, current insurance practices suggest, consistent with deterrence theory, that automobile accident rates are a function not only of driving activity levels but also of driving care. The typical insurance contract combines insurance coverage with the use of deductibles and experience rating. These contractual devices suggest that insurance companies believe that drivers <u>can</u> be induced to exercise different levels of care in their driving given appropriate economic incentives. This is all that a deterrence theory account of tort law is claiming.

Finally, one other point about tort law's fault standard is worth emphasizing even though it is not, strictly speaking, a

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[18] See W. Wiegers, "The Use of Age, Sex, and Marital Status as Rating Variables in Automobile Insurance". (1989) 39 <u>Univ. of Toronto L.J.</u> 149

point about deterrence. Even under an imperfectly risk-rated third party insurance system, tort law still operates to stigmatize certain kinds of conduct and, therefore, arguably helps to reinforce socially responsible attitudes to risk taking.[19]

(b) Compensation - Victim Coverage

How many victims of auto accidents get compensated from the tort system, from the no-fault accident benefit component of the existing insurance package, and from various private and social collateral sources ? How adequate is the compensation from these various sources ?

In progressive tort jurisdictions (with comparative negligence and no guest passenger rule), between 50 and 60% of all persons injured in motor vehicle accidents have a valid tort claim.[20] Unlike some other types of personal injury (e.g., medical malpractice) where a large proportion of eligible tort claimants fail to initiate claims and recover liability payments, a high percentage of eligible automobile injury claimants appear

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19 The Hon. Mr. Justice Coulter, A. Osborne, Report of Inquiry into Motor Vehicle Accident Compensation in Ontario 1988 (hereafter the Osborne Commission Report) (1988) Vol 1, at 530-43

20 D. Dewees and M. Trebilcock, The Efficacy of the Tort System and Its Alternatives: A Review of the Empirical Evidence (Faculty of Law, University of Toronto, Law and Economics Working Paper, 1991) at 16.

to obtain some compensation through the tort system.[21] Nevertheless, despite these apparently high rates of claims initiation and claims payment, even the most progressive tort regimes leave most traffic victims ineligible for any third-party compensation. On this basis, it is hard to disagree with commentators who have described tort compensation for automobile injuries as "incomplete" and "deliberately selective"[22] - a system of compensation that is not intended to compensate all accident victims.

Unlike first-party insurance, where the payment of premiums guarantees the insured a stipulated basic coverage against loss, tort compensation relies ultimately on the ability of each negligent defendant to satisfy the specific plaintiff's damages. To the extent that defendants are uninsured or underinsured, therefore, the liability payments actually made to traffic victims, particularly those most seriously injured and suffering large economic losses, are apt to be incomplete. Although it is estimated that only a small proportion (less than 2%) of Ontario motorists are uninsured,[23] studies place this figure at between 8 and 11% of U.S. motorist nationwide, more than 20% in several

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21 D. Harris et. al. reports that 34 percent of road accident victims seek tort compensation. See Compensation and Support for Illness and Injury (Oxford: Clarendon Press, 1984), at 62

22 R. Bombaugh "The Department of Transportation's Auto Insurance Study and Auto Accident Compensation Reform, (1971) 71 Columbia L.R. 207, at 211

23 The Osborne Report, supra n.19. Vol 1, at 97

states, and almost 70% in urban areas like Detroit and Los Angeles.[24] Moreover, these motorists tend to be involved in more accidents than their numbers suggest. Evidence on the rate of underinsured motorists shows a similar contrast between Canada (where all jurisdictions retaining tort actions for automobile injuries, including Alberta, require drivers to carry a minimum of $ 200,000 liability insurance) states, and the United States (where liability insurance remains optional in 11 states, and minimum policy-limits generally range from between $10,000 and $25,000 coverage per victim). In Ontario, a recent study of paid liability claims found that almost 85% of defendants carried at least $500,000 liability coverage.[25]

Ontario data collected for the Osborne Inquiry on Motor Vehicle Accident Compensation indicates that tort compensation for automobile injuries is dominated by payments for non-pecuniary losses. In a survey of about 1,500 paid liability claims closed in 1986, 94.5% received damages for non-pecuniary loss, while only 38.4% were paid for loss of employment income. In total, 45.6% of all liability payments were for non-pecuniary damages, and a further 5.4% for family law actions for loss of care, guidance, and companionship. While this ratio decreased for claims involving larger dollar amounts, non-pecuniary damages represented "the single most significant segment of damages at all levels," even for claims involving $75,000 or more. For

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24 Ibid., Vol 1, at 480

25 Ibid, Vol 2, at 542

claims of $10,000 or less, compensation for non-pecuniary loss amounted to more than 70% of total liability payments.[26]

Ontario data also suggests that the vast majority of liability claims are dominated by relatively minor injuries with small economic losses. The vast majority of claims involve nominal injuries ("shaken up") and injury to soft tissue.[27] Of the mere 56.9% of paid claimants who suffered measurable time loss, almost 45% lost 4 weeks or less, and only 19% experienced time loss of more than 6 months.[28] More than half of all payments were for amounts of $3,000 or less (27.7% less than $1,000), and only 21.5% involved payments of more than $10,000.[29]

The compensatory effects of the current tort system are also affected by the existence of collateral benefits. A recent Ontario study concluded, "the collateral source rule results in substantial overcompensation to ... motor vehicle accident victims taken as a group.[30]" Considering all sources of compensation, this Ontario study determined that the roughly 30% of claimants with collateral benefits above and beyond add-on automobile accident benefits (themselves deducted from tort awards) received compensation for loss of employment income equal

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26 For these data, see ibid Vol 1 at Fig. 7-7, 7-8 and 7-9

27 Ibid, Vol 2 at 551

28 Ibid

29 Ibid

30 Ibid, Vol 1, at 430

to almost 136% of their gross lost wages.[31]

Notwithstanding overcompensation of some claimants when all sources are taken into account, empirical evidence also reveals a consistent tendency of the tort system to undercompensate victims with large economic losses.[32] This seems to be a function of both the claim settlement process and also insufficient liability coverage. Although recent surveys have not compared tort payments received to estimated economic losses, at least four studies based on 1960's claims data document the tendency of third-party liability insurance to overcompensate small losses and undercompensate large losses. In 1964, a University of Michigan study of serious injuries reported that those with small economic losses ($1-$999) tended to be overcompensated while those with large ($5,000-$24,999) and very large ($25,000 and over) economic losses were almost always undercompensated. A 1965 study of Ontario claims disclosed that while aggregate tort benefits represented 71.8% of total pecuniary losses for minor injuries, this ratio fell to 45.6% for serious injuries. A 1970 study by the U.S Department of Transportation found that of those who received tort compensation, claimants with economic losses of less than $400 received on average a multitude of 4.5 times their actual expenses; in contrast, those with economic loss between $10,000 and $25,000 recovered on average 70% of their economic loss, while those with economic loss of $25,000 or more recovered

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31 Ibid

32 See Bombaugh supra n.22, at 213

on average 30% of their loss. Moreover, the same pattern of overcompensation for small injuries and undercompensation of severe injuries persists even when total benefits from all compensation sources are considered.

(c) Compensation - The Cost Internalization Perspective

To what extent are tort compensation costs borne by wrongdoers or parties at fault in traffic accidents; to what extent are they borne by other sources; to what extent are insurance premiums fault or risk-rated ?

In Canada, first-party compensation for some of the losses associated with auto accidents is available from various sources. In particular, public health insurance pays for virtually all medical and physical rehabilitation expenses.

However, in contrast to life and health insurance, first party insurance for lost household services and employment income is far less comprehensive. Except for the limited benefits payable under the no-fault provisions, no first-party insurance coverage of which we are aware is available for lost household services. Workers' compensation schemes in Canada pay substantial income replacement to traffic victims injured in the course of employment , but occupational injuries represent only a small fraction of all auto accidents. In addition, social welfare programs like the Canada Pension Plan provide long-term replacement income, but amounts are minimal ($56 plus 19% of earnings up to a maximum benefit of $146/week CPP disability

payments) and limited to cases of protracted total disability. In Canada, unemployment insurance sickness benefits pay more generously (60% of lost wages up to a maximum benefit of $318/week), but compensation is limited to 15 weeks after a two week waiting period. Private long-term disability protection generally replaces 60-70% of income, but is held by fewer than half of all employees (eg. by only about 20% of U.S. employees and by 40% of full-time employees in Ontario). Employment related short-term disability income protection and sick leave are more widely held (eg. by about 56% of American employees, according to 1984 data),[33] but these pay benefits for only a short duration. To some extent, all of the private and many of the public income replacement schemes outlined above charge different premia according to the levels of income that are being insured (i.e. higher income recipients pay higher premia). In this respect, therefore, there is some limited cost internalization to the victim that are involved in automobile accidents. On the other hand, the extent to which accident victims can externalize the cost of their automobile injuries to others, eg. through public health or social welfare systems, may lead to the purchase of even lesser amounts of first party insurance, with the result that there is even less cost internalization to the parties involved in automobile accidents. The traditional tort rule on

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33 J. O'Connell and J. Guinivan, "An Irrational Combination: The Relative Expansion of Liability Insurance and Contraction of Loss Insurance" (1988), 49 Ohio St. L.J. 757, at 763

collateral source benefits, and the availability of subrogation rights to public insurers, are helpful in maintaining cost internalization.

(d) Operational Efficiencies

What administrative costs are associated with the operation of a maximum tort - minimal no-fault add-on system such as exists in Alberta? What kinds of delays are associated with payments to victims under the system?

As to the timeliness of compensation, Canadian and U.S. studies disclose considerable delays in the payment of third-party benefits, particularly to claimants with serious injuries and higher pecuniary losses.[34] A 1965 study of paid claims in Ontario estimated the median time from auto accident to tort payment at 3-5 months for minor injuries, and 11.5 months for serious injuries.[35] A similar study for the British Columbia Royal Commission on Automobile Insurance calculated these median durations as 4 months for minor injuries and 9 months for serious injuries.[36] A 1970 study by the U.S. Department of Transportation concluded that the average time between automobile accidents and third-party liability settlements was 13 months for

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34 See, e.g., Bombaugh supra n. 35 at 216-22; Ontario Law Reform Commission (OLRC), Report on Motor Vehicle Accident Compensation (hereafter OLRC Report) (1973) at 56-63; U.S. Department of Transportation, Compensating Auto Accident Victims: A Follow-up Report on No-Fault Auto Insurance Experiences (hereafter DOT Report) (1985) at 79.

35 OLRC Report, supra n. 41, at 57.

36 Ibid.

claims involving more than this amount.[37] More recently, a 1985 U.S. Department of Transport study disclosed the following inverse relationship between the speed of tort compensation and the amount of economic loss:

Timing of First Payment By Size of Economic Loss: Liability Claims[38]

Days from Report to First Payment	Amount of Economic Loss		
	Less Than $500	$500 to $2,500	Over $2,500
0 to 30	37.8%	8.7%	7.9%
0 to 90	61.4%	22.4%	17.3%
0 to 180	76.1%	42.0%	29.6%
0 to 365	88.1%	66.7%	50.6%

While liability claims involving small amounts of economic loss are frequently settled relatively expeditiously, third-party claims with $500 and more in economic losses typically drag on for several months before any payment is made.

First-party insurance plans display a noticeable ability to initiate a flow of payments to accident victims more rapidly than third-party liability insurance.[39] As indicated in the following table reporting U.S. data from no-fault jurisdictions, not only are first party payments to traffic victims delivered

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37 Bombaugh, supra n. 35 at 216.

38 DOT Report supra n. 41 at 80.

39 Ibid.

more quickly than third-party liability payments at all levels of economic loss, but first-party claims with large economic losses are compensated almost as promptly as those with small economic losses:

Timing of First Payment By Size of Economic Loss: First-Party Claims[40]

Days from Report to First Payment	Amount of Economic Loss		
	Less Than $500	$500 to $2,500	Over $2,500
0 to 30	39.8%	31.6%	31.0%
0 to 90	83.3%	74.4%	76.0%
0 to 180	95.1%	89.9%	90.3%
0 to 365	98.7%	96.3%	95.5%

Many studies have confirmed the ability of first-party insurance plans to compensate automobile accident victims much more quickly than third-party liability insurance.[41]

Studies estimate that tort compensation costs about as much to administer as is ultimately available to injured traffic victims.[42] In delivering benefits to eligible claimants, the tort system incurs three types of administrative costs: operating

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40 Ibid.

41 See eg., ibid, at 79 and the Osborne Report, supra n. 34, vol. II, at 546 and 569.

42 OLRC Report, supra n. 41, at 15. See also Bombaugh supra n. 35, at 231 (citing evidence that tort compensation costs about $2.07 for every $1.00 in net benefits received by automobile accident victims).

and claims adjustment costs of liability insurers, claimant costs of acquiring benefits, and public costs to adjudicate claims that are not settled before trial.[43] In a privately operated insurance industry, several studies estimate that the first expense category (operating and adjustment costs) represents roughly a third of each premium dollar paid for liability insurance.[44] Where the supply of liability insurance is restricted to a public monopoly, reduced brokerage fees and agency commissions appear to decrease total operating and adjustment expenses by between 10 and 15% of the premium dollar.[45] Claimant legal expenses are estimated to consume another 10 to 15% of liability premiums in Canada,[46] and roughly a quarter of the premium dollar in the United States.[47] Finally, although liability claimants do not bear the costs of public court expenditures, different studies have concluded that automobile claims account for about half of all tort claims,[48] roughly 40% of the civil trial time spent by courts of general

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43 Bombaugh supra n. 35, at 229; DOT Report, supra n. 41, at 82.

44 See eg., OLRC Report supra n 41 at 15, 72; Osborne Report supra n. 34, Vol. I at 294, 522-23.

45 Osborne Report, supra n. 34, Vol. I at 679.

46 OLRC Report supra n. 41 at 15, 42, 71-72; Osborne Report, supra n. 34, Vol. I at 258 (Figure 7.7).

47 Bombaugh supra n. 35 at 229; DOT Report supra n. 41, at 82.

48 J. Kakalik and N. Pace Costs and Compensation Paid in Tort Litigation (1986)

jurisdiction,[49] and 17% of civil and criminal judicial resources.[50] Although we have as yet to find any current estimate of the total public cost of this litigation, 1968 data indicated a total public cost of motor vehicle claims adjudication in the United States of $133.7 million.[51]

Compared to first-party insurance plans, tort compensation is considerably less efficient. Comparing an average net pay-out of 50.2 cents in threshold no-fault states to a figure of 43.2 cents in traditional tort states, the U.S. Department of Transportation concludes that "a no-fault system suggests that there may be cost savings in the range of 10 to 24% of earned premiums in such a system,[52] although other estimates put the savings at a much lower figure (5 per cent).[53] In addition, although we are unaware of any efforts to measure this effect, significantly lower rates of lawyer involvement and claims litigation under first-party plans suggests that a higher percentage of benefits paid to claimants will be available to address actual economic losses from automobile accidents. When one also considers the likelihood of savings in public court costs as a result of fewer automobile accident cases, it is clear

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49 OLRC Report supra n. 41, at 15.

50 Bombaugh supra n. 35, at 225.

51 Ibid.

52 Rose Ann Devlin, Liability versus No Fault Automobile Insurance Regimes: An Analysis of the Experience in Quebec 1988, at 249-57.

53 Osborne Report, supra n. 34, Vol. I at 528.

that first-party insurance is considerably more efficient in compensating automobile injuries than third-party liability insurance.

(e) Premium Costs[54]

The number of insured vehicles in Alberta has grown substantially from 487,086 vehicles in 1972 to 1,297,804 in 1989. Premium volume has grown in the same period by more than eight fold, from $66,581,225 in 1972 to $577,038,476 in 1989. The average premium per insured vehicle was $137 in 1972 and $445 in 1989. However, the 225% increase was less than the cost of living increase in Alberta during the same period. Inflation in the period would have increased the cost of living by 257%. Thus, in 1989, the average premium in real dollar terms had actually decreased by 9% when compared against 1972 premiums. Over these years, there has been a general increase in coverage. In 1972, only 67% of insured vehicles carried collision; in 1989, 75% carried collision. In 1972, 34.4% carried comprehensive coverage, 35.4% had specified perils; in 1989, 78.2% carried comprehensive and 9.5% carried specified perils. The increase in coverage together with a decrease in average premium in real dollar terms indicated that Albertans were getting a better deal for their

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54 The following account of the growth of premium costs in Alberta under the current tort regime is taken form J. Cheng (Eckler Partners Ltd), "Alberta Automobile Insurance: A Historical Review" (unpublished 1991).

dollar in 1989 than in 1972.

This, however, did not mean that premiums, have been stable over the years. Exhibit I (see Appendix A to this chapter) illustrates the actual average premium per vehicle insured, all coverages combined. Between 1972 and 1989 there were two periods where the average premiums increased dramatically: 1974 to 1977 and 1980 to 1983. In the first of these periods, the average premium jumped from $145 in 1974 to $272 in 1977, an increase of 23.4% per annum. While inflation was running at double digits during this period, the inflation adjusted rate of increase was still 13% per annum. Between 1980 and 1983 the rate of increase in average premiums was 15.7%, but the inflation adjusted increase was less than 1%. Exhibit II (see Appendix B to this chapter) depicts the changes in average premium per vehicle in 1989 dollars over the seventeen year period. It can be seen that in standardized dollar terms there have been drastic swings in premiums per vehicle. The highest point was reached in 1977. Since then, there has been a steady decline in real dollar premiums. Nevertheless, it should be noted that in 1989 and 1990 companies have increased premiums in Alberta. This could signa_ the beginning of another period of double digit rate increases.

The premium costs in Alberta also compare favourably to comparable tort jurisdictions in the rest of Canada. Between 1984 and 1988, for example, the loss cost per car insured for bodily injury and property damage liability in Alberta, while always higher than the figure for the Atlantic provinces and lower than

the figure for Ontario, was much closer to the former than the latter, and never was greater than 71% of the average figure for all of Canada (excluding the other western provinces and Quebec).[55] Thus, under the current maximum tort minimum no fault regime, it appears that Albertans are enjoying premium costs that are not only falling in real terms, but also compare favourably to the national average for like jurisdictions.

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55 See 1988 Automobile Insurance Experience (Insurance Bureau of Canada "Greenbook"), at 289.

Exhibit I

ALL COVERAGES - ALBERTA

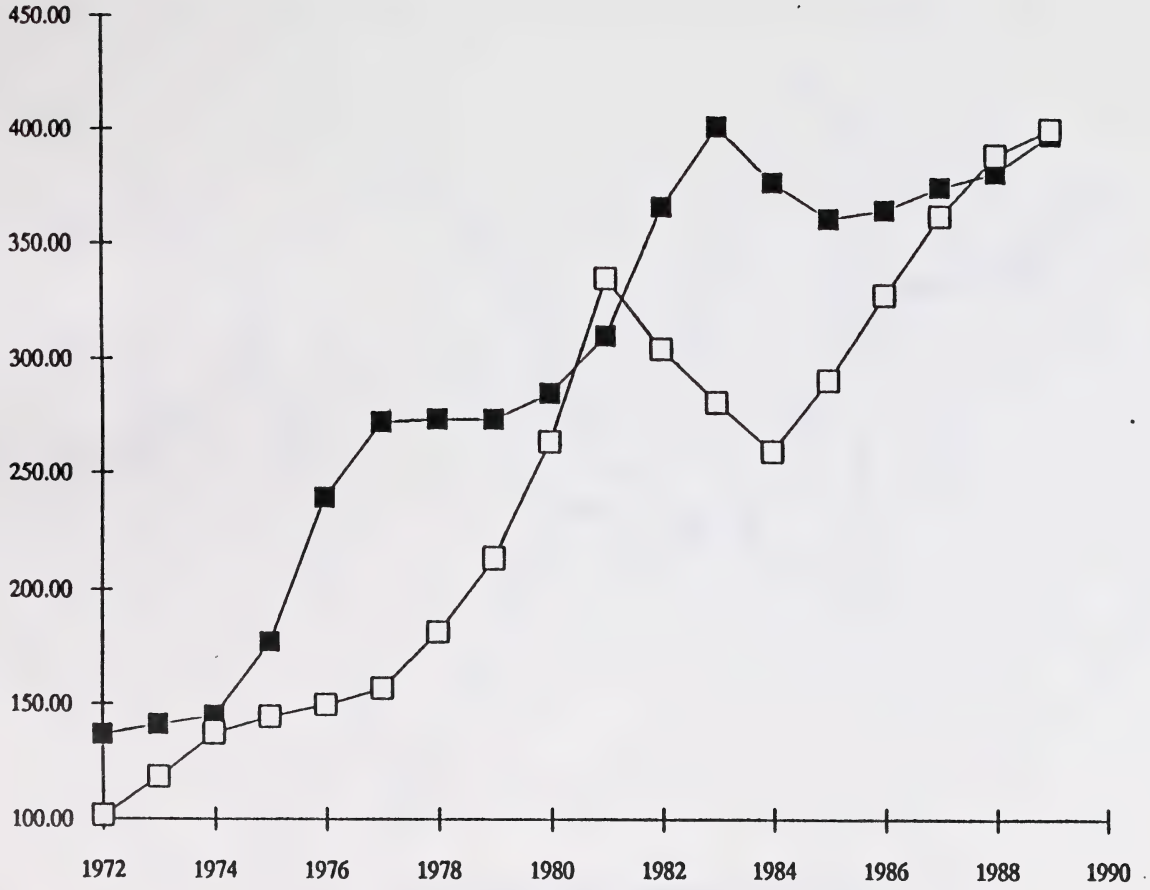
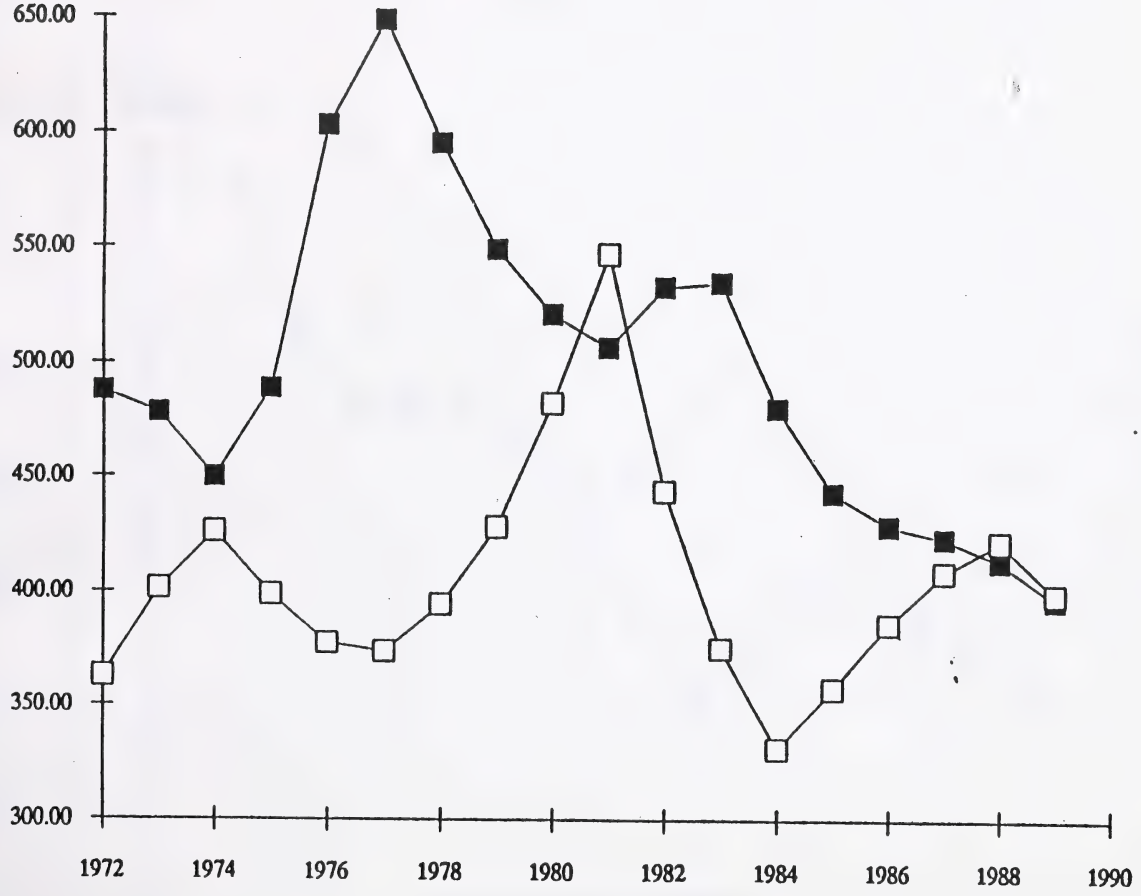


Exhibit II

ALL COVERAGES - ALBERTA (INDEXED)



APPENDIX B

CHAPTER 3

REGULATING TRAFFIC SAFETY

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I INTRODUCTION[1]

Over 4,000 Canadians die in traffic related accidents every year. Many times that number sustain personal injuries and property damage. In 1989, 487 Albertans were killed [2] and 19,753 injured in traffic accidents. The private and social costs of traffic accidents are enormous. To put these numbers in perspective, from 1945 to 1985, 168,319 people were killed in automobile accidents in Canada: more than the combined total of Canadian fatalities in World War I (60,661) and World War II (42,042). In the decade 1976-1986 alone more people were killed on Canadian roads than were lost during World War II.[3] While aggregate traffic fatalities rose fairly consistently over time in most industrialized countries since the introduction of the automobile, they peaked in the U.S. and Canada in the mid-seventies and have since been consistently declining. Moreover, fatality rates, measured in terms of distances driven, have consistently and dramatically declined over time in most industrialized economies. For example, U.S. fatalities declined from 4.8 people killed per one hundred million kilometers driven in 1950 to 3.2 in 1960, 2.9 in 1970, 2.1 in 1980, and 1.6 in

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1 This section is derived largely from Martin Friedland, Michael Trebilcock, and Kent Roach, 1990.

2 Alberta Traffic Accident Statistics, 1989 (Ministry of Transportation and Utilities) Table 1.1

3 For 1945-1975; F.H. Leacy, (1983) at pp. T271-284; for 1976-1984: Canadian Motor Vehicle Traffic Accident Statistics, 1985 Tp. 3322.

1984.[4] In Ontario, fatality rates have declined from 10.2 in 1931, 8.6 in 1940, 5.3 in 1950, 4.2 in 1960, 3.2 in 1970, 2.1 in 1980 to 1.7 in 1987.[5] The OECD in a recent study notes: "It is remarkable that this uniformity exists in spite of the diversity of legislation, government structures, safety programmes and their management".[6] Both because of the resources devoted directly to reducing the toll on the highway and to researching its causes, one might have assumed that the effects of various interventions are well understood. In fact, there is little consensus on what works and what does not work.

Most of the effort to control traffic accidents historically has been concentrated on changing driver behaviour. Police surveillance and prosecution have dominated control strategy. But one looks in vain for studies that compare the cost effectiveness of policing with, for example, improved road design and maintenance, or specific safety features in cars. Our impression is that we have concentrated and continue to concentrate our resources too heavily on changing driving behaviour. Switching some of the resources now devoted to

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4 US Bureau of Census, Statistical Abstract (1971) 540, (1987) 588.

5 Report of Inquiry into Motor Vehicle Accident Compensation in Ontario (1988) (hereinafter the Osborne Report), 750; Ontario Road Safety Annual Report (1987) 8.

6 OECD Road Safety Research: A Synthesis (1986) 13. The trend is sometimes referred to as 'Smeed's law' (after British transportation analyst R.J. Smeed, who first drew attention to such a phenomenon in 1949), which postulates declining fatality rates with increased industrialization and motorization . See J.G.U. Adams, (1985).

policing and prosecution to improving car and road design and to curtailing activity levels of high risk classes of drivers seems likely to improve road safety. Beginning in the late 1950's, attention has no longer exclusively focused on drivers' care levels and prevention of crashes, as traffic safety experts and eventually policy makers began to realize that the damage sustained in crashes could be reduced by other forms of environmental regulation. The intellectual foundation for the new focus on the safety effects of automobile and environmental design came primarily from the work of William Haddon Jr. who as an epidemiologist advanced a conceptual framework (the Haddon matrix) for analyzing automobile accidents and the various methods of reducing their costs.[7] This matrix distinguishes human, vehicle, and environmental factors in accidents and temporally breaks down accidents into pre-crash, crash, and post-crash phases for analyzing potential interventions. These categories had their origins in the traditional epidemiological terms of host (in this case, those injured in motor vehicle accidents), agent (mechanical energy of the vehicle), and environment (the vehicle and surroundings in which the host and agent interact). Haddon argued that attention should be paid to all three factors, because automobile accidents represented a straight-forward example of the epidemiologic triad. Drawing on epidemiological analysis of problems such as the control of

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[7] W. Haddon, (1972); W. Haddon, (1980); W. Haddon and S. Baker, (1981); W. Haddon, (1970); W. Haddon, (1975).

infectious diseases, Haddon and others took the view that prevailing traffic safety measures were excessively preoccupied with human factors and with reducing the incidence of crashes, whereas greater attention to the injury-producing effects of the vehicle and crash environment could prove the most effective means to reduce the harmful results of automobile accidents as measured by injuries and fatalities.

A major analytical challenge to the epidemiological perspective that treats driver behaviour more or less as given and stresses change to the accident environment has emerged over the last decade or so. This challenge rejects the notion that road users should be viewed as passive agents in the traffic environment and argues instead that road users are likely to adapt their behavioural responses to changes in their environment. This competing perspective was brought into prominence through a controversial article published in 1975 by University of Chicago economist, Sam Peltzman,[8] who argued on the basis of empirical analysis that motor vehicle safety design improvements mandated under the U.S. National Traffic and Motor Vehicle Safety Act of 1966 had had no effect on subsequent fatality trends. Peltzman postulated that by reducing the consequences of the so-called second collision through safety regulation, risk taking, or what he called driving intensity, would be increased as drivers drove less cautiously in order to achieve the same trade-off that they had experienced prior to

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8 S. Peltzman, (1975).

regulation between expected accident costs and benefits from conserving time on the road. This hypothesis, often referred to as the risk compensation or risk homeostasis theory, has reinstated to some degree a focus on the factors that influence individual driver behaviour. Another factor that has brought the use of criminal sanctions back onto centre stage over the past decade or so is the increasing political activity of pressure groups concerned with victims of drunk driving and sensitivity of politicians, police, and prosecutors to these groups. Partly obscured in this debate over the relative efficacy of public policies directed towards changing driver behaviour and policies directed to making the driving environment more forgiving of driver errors is a set of compliance-based policies typically revolving around driver licensing regimes that either through attaching conditions to the obtaining of a license or through the threat or actuality of license withdrawal attempt to reduce the activity levels as well as increase the care levels of high risk groups of drivers.

We proceed now to review what the existing empirical evidence appears to suggest as to the relative efficacy of alternative forms of public intervention designed to reduce traffic accidents.

II SANCTIONS

While a vast amount of public resources and court time are directed to the prosecution of traffic offences, there is

surprisingly little firm evidence as to the effect of criminal sanctions on the traffic accident rate. Several studies that have examined the effects of police slow-downs as a result of labour disputes leading to substantial reductions in traffic violation citations, or differential enforcement levels from one location to another, have tended to find no immediate measurable impact on the frequency or severity of traffic accidents.[9] More systematic evidence on the long-term effects of changes in sanctions or enforcement policy has tended to focus on seatbelt use, speeding, and drunk driving.

(a) Seat Belts

Many jurisdictions in North American and elsewhere have now enacted laws making seatbelt use compulsory. The empirical evidence suggests that the existence of a mandatory seatbelt use law will significantly affect seatbelt use.[10] For example, in 1986 provinces in Canada with such legislation had a use rate of 67.8%, whereas Alberta and Prince Edward Island, which had not then enacted mandatory use laws, had a use rate of only 27.2%. Alberta's use rate rose to 74.3% in 1987, the year after it adopted mandatory seatbelt use legislation, and to 82.5% in 1988. England's rates remained at about 30% from 1979 to 1982, inspite of large scale public education campaigns which cost

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9 A.F. Carr, J.F. Schnelle, and R.E. Kirchner, (1980). See also R. Zylman, (1972); J.A. Gardiner, (1969).

10 See R.J. Bonnie, (1986); B.A. Jonah and J.J. Lawson, (1985)

approximately £2 million annually.[11] After legislation was adopted in 1983, compliance rose to 90%.[12] While the adoption of mandatory seatbelt use laws in the U.S. is more recent, the data is broadly consistent with the Canadian and English data,[13] although use rates are significantly influenced by levels of enforcement and levels of penalties for non-compliance. In a number of U.S. jurisdictions only secondary enforcement of seatbelt laws is permitted i.e. only where another violation has been committed. High levels of primary enforcement appear to influence significantly the use rate.

However, the ultimate question is not whether seatbelt laws increase use rates but whether they reduce accident costs. The answer appears to be clearly affirmative. Persons who are buckled-up are less seriously injured in accidents than persons in comparable situations who are not buckled-up. A study of 28,00 accidents in Sweden reported in 1976 by Bohlan has been very influential in subsequent debates. Bohlan concluded that the seatbelt offers full protection against fatal injury at accident speeds of up to 60 m.p.h..[14] Mackay, an English expert, claimed in 1981 that seatbelts could reduce the rate of fatalities by 50 or 60%.[15] An OECD road safety research

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11 M. Mackay, (1985).

12 Ibid., 259

13 B.J. Campbell, (1987).

14 N.J. Bohlin, (1967).

15 G.M. Mackay, (1981).

synthesis concluded that a seatbelt, when properly used, will reduce serious injuries or fatalities by 40 to 50%.[16] A 1985 British government study that evaluated injury patterns for the year before and the year after the implementation of the 1982 legislation found significant safety gains. In their study of 14 British hospitals which admit 59% of all patients with serious traffic injuries, the authors found a reduction of 20% in severe injuries for drivers, 20% in severe injuries for front seat passengers, and 34% in brain injuries.[17]

However, the concept of risk compensation or risk homeostasis, noted above, must be confronted. Will the use of seatbelts actually increase the number of accidents, even if it helps those who wear them? For example, John Adams argues that "protecting car occupants from the consequences of bad driving encourages bad driving".[18] However, a number of studies appear to show that people wearing seatbelts do not drive less carefully

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16 OECD, (1986). The evidence of insurance losses in the United States following adoption of mandatory seat-belt laws is ambiguous, according to a study by the Highway Loss Data Institute. A comparison of insurance losses before and after adoption of eight state mandatory seat-belt use laws shows no clear-cut reductions in the number of injury claims. The researchers stated that 'belts are much less effective in preventing relatively minor injuries than serious and fatal injuries and most insurance injury claims are for relatively minor, but often expensive, injuries'; see Status Report 23 no. 9(17 September 1988) 6.

17 W.H. Rutherford et. al., (1985).

18 J.G.U. Adams, (1981).

than others.[19] In other words, there is little, if any, risk compensation, let alone homeostasis, with seatbelt use. Drivers do not want to experience an accident, even if it is less severe than it might otherwise be. Moreover, safety features such as seatbelts provide little direct and immediate feedback to the driver and thus are distinguishable from other vehicle design features, such as good brakes and faster car acceleration. Unfortunately, the least cautious drivers seem to be the ones to belt-up last. Some studies have shown that young people are less likely to buckle-up than older drivers. The same is true for those who drive faster and for those who drink and drive - that is, the same drivers tend to engage in a variety of risky behaviours.[20] Thus, increasing the level of compliance should be increasingly effective as belt use levels increase.

One solution to the problem of seatbelt use is, of course, passive restraints, such as automatic seatbelts or airbags, which do not depend on individual decisions for their efficacy. For example, Haddon who was a strong proponent of passive restraint systems compared the active strategy of influencing people to wear seatbelts to the passive strategy of requiring airbags or similar devices. Airbag and seatbelts both attenuate the potential damaging energy transfer that occurs with sudden

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19 L. Evans, P. Wasislewski, and C.R. Ban Buseck, (1982); P.S. McCarthy, (1985); M. Mackay (1985); B.A. Jonah and J.J. Lawson, (1984); B. O'Neill, A.K. Lund, P. Zador, and S. Ashton, (1985); OECD, Synthesis (1986) 65.

20 Jonah and Lawson (1984).

deceleration, but the active approach of seatbelts requires, for complete success, billions of individual actions per month by all sorts of people in all sorts of mental and physiological states. On the other hand, the universal provision of airbags to achieve the same purpose would require only a single behavioural change - a simple binding decision by one federal official or by some three or four executives in motor vehicle manufacturing companies.[21] This proposal has been the subject of enormous controversy and debate in the U.S.. Opponents view it as an obtrusive form of paternalism, and as requiring prudent drivers who already voluntarily buckle-up to cross subsidize those who do not, through being forced to buy safety devices entailing additional expense of little incremental safety value for them. However, The U.S. National Highway and Traffic Safety Administration (NHTSA) appears likely to insist on the installation of automatic restraint systems for drivers and front seat passengers in all cars produced after September 1993, unless further delays are granted in implementation.

(b) Speed Limits

The experience with respect to the enforcement of speed limits is somewhat more mixed than with respect to the enforcement of seatbelt use laws. This is so despite the enormous resources devoted to the apprehension and prosecution of speed limit violators - for example in Ontario, Canada, in 1986

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21 W. Haddon, (1974).

there were over 780,000 convictions for speeding - over two-thirds of all convictions under the Highway Traffic Act.[22] Enforcing speeding laws uses a large amount of police resources and yet barely covers the highway system. In the U.S. it is estimated that there are 190 miles of highway for every on-duty patrol officer.[23] Moreover, increased enforcement is often concentrated on the better roads - the very roads that tend to be safer. The present system of defined speed limits is simple to operate and fits the needs of any quota system that exists in a police department. It also encourages the use of policy radar, which measures speed, not danger. It encourages the police to go after the easy cases and locations which are often the least dangerous and where people understandably increase their speed, sometimes referred to as "fishing holes". It also encourages police to catch people where there is not much traffic, so that the speeder can be easily isolated, and not to bother with dangerous speeders weaving from lane to lane in heavy traffic. How effective is the criminal process in controlling speed? A number of studies have tested the effect of a police cruiser on the side of the highway.[24] Hauer and others have shown that the effect of a police car is dissipated a few miles away. In

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22 Ontario Motor Vehicle Accident Facts, 1986, 60.

23 U.S. Transportation Research Board, (1984) 13 and 147. The estimate was based on highways that were subject to the 55-mph limit.

24 D. Shinar and A.J. McKnight (1985) at 392. E. Hauer, F.J. Ahlin, and J.S. Bowser, (1980).

other words, there is a distance halo operating in both directions of the highway, and there may also be a short- term time halo effect operating for a few days after enforcement. There have also been studies of the effect of an increase in enforcement on a large segment of a highway system. California, for example, increased enforcement in 1982 on five heavily travelled interstates by allocating an additional $1.3 million for overtime enforcement. Compliance improved by 5% - from 78.2% who disobeyed the law to 74.7%. Similar results have been found in other studies, but when the patrol officers were removed, reductions in speed quickly disappeared.[25]

Even on the assumption that sanctions against speeding violations influence driver behaviour, the ultimate question must be still be addressed of whether speeding is a significant cause of injury-producing accidents. The data on this question is quite mixed. Following the introduction of the 55 m.p.h. speed limit by the U.S. federal government in 1973, following the OPEC oil crisis, the accident rate decreased for 1974. However, this seems to be in part explained because of a decrease in exposure through less driving activity, although when measured against the distances driven, the decrease in accidents and fatalities was still found in some studies to be significant.[26] On the other hand, a 1986 study by the Brookings Institution found that in the

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25 U.S. Transportation Research Board (1984), 147. See also D.T. Campbell and H.L. Ross, (1968).

26 U.S. Transportation Research Board (1984), 140-1; J.H. Hedlund (1985), at 8-9.

post-embargo years the 55 m.p.h. speed limit does not seem to have had a large effect upon total deaths.[27] Perhaps reinforcing this view is the Ontario experience where speed limits were not reduced until 1976. Ontario also showed a major decrease in fatalities in 1974, even though the speed limit was 70 m.p.h. In 1976 speed limits in Ontario were reduced from 70 to 60 m.p.h., and deaths showed another major decrease, but it is difficult to separate speed reduction from the introduction of mandatory seatbelt use laws in that year. The fact that fatalities fell on all types of road in 1976, even ones whose speed limits were not changed, indicates that speed may not have been the key consideration. In 1987, the U.S. Congress passed legislation permitting states to increase the speed limit to 65 m.p.h. on rural expressways. As of April 1988, 40 states had raised the speed on rural interstates to 65 m.p.h. One recent study claims that deaths rose by 52% on freeways over a three month period from May 1987 to July 1987 in the 22 states that had raised their limit at that time. But this does not tell us how many more drivers there were on interstates than before and how many persons switched from less safe roads, where the speed was still 55 m.p.h., to interstates. In fact, the evidence is consistent with greater safety: although deaths rose in the 22 states from 296 to 450 on the interstates, they dropped from 4830 to 4350 on other highways in these states. Overall, highway

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[27] R.W. Crandall, H.K. Gruenspecht, T.E. Keeler, and L.B. Lave, (1986) at 65, 67.

traffic deaths dropped in the states that had raised the speed limit.[28]

Of course, reducing speed limits should, in theory, reduce the frequency and severity of accidents. The higher the speed, the slower the reaction time to a crisis, the longer it takes to stop, and the greater the impact and damage if there is a crash. However, low highway speed may cause drivers to pay less attention to their task (an example of risk compensation?), and may cause more passing and variance in speed than might occur if the speed limit were higher. Low highway speeds will also require more driving time, with consequently greater possibilities of fatigue and drowsiness. Variance in speed is a very important factor in the relationship between speed and accidents. A number of studies have found that the greater the absolute deviation from mean traffic speed the higher the accident rate.[29] This suggests first that speed limits should not be set so low as to encourage massive violations and higher variance in speed, and secondly, suggests that enforcement activity and severity of sanctions should be targeted on drivers who are guilty of substantial deviations from mean traffic speeds.

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28 Insurance Institute for Highway Safety, Status Report 22, no. 14 (26 December 1987) 1. See also Status Report 23, no.3 (14 March 1988) 7; Status Report 23 no. 7 (9 July 1988) 3; Status Report 23 no.8 (13 August 1988) 1 and 24 no. 1 (28 January 1989) 1.

29 U.S. Department of Transportation, (1982) 17-2, 17-6 See also E. Hauer, (1971).

(c) Drunk Driving

Criminal sanctions are the main form of regulation directed at reducing traffic accidents involving drunk drivers.[30] Enormous resources are devoted to enforcing criminal sanctions against drunk driving. An American estimate suggests as many as 1.8 million drunk driving arrests in the U.S. a year.[31] In recent years, increasing emphasis has been placed on the moral dimensions of the use of criminal sanctions against drunk driving, and governments and interest groups have consciously tried to criminalize drunk driving, largely by increasing the severity of sanctions, so that it is not perceived as a commonplace, low stigma folk crime, in the manner of other traffic offences, such as speeding.

The structure of most criminal sanctions against drunk driving facilitates enforcement through requirements for mandatory supply of blood or breath samples and the use of an

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30 Despite some apparent recent reductions, drunk driving remains the most important identifiable fact in fatal traffic accidents. In the United States in 1980, 50.1 per cent of fatally injured drivers tested for alcohol had blood alcohol concentrations (BACs) of over 100 mg/100 ml, and in 1983 46.4 per cent had such BACs: J. Fell, (1985) 452. In 1980 in Canada, 47.9 per cent of fatally injured automobile drivers tested for alcohol had BACs over 80 mg/100 ml; in 1983, 42.6 per cent; in 1985, 41.3 per cent; D. Beirness et al., (1985); G. Haas et al., (1985) Table A-2; A. Donelson et al., (1985). The presence of alcohol in these fatal accidents does not necessarily mean that drunk driving 'caused' the crash. Traffic accidents are the result of many interactive conditions, and the most effective means of prevention is not always one that addresses the primary causal determinant of the accident.

31 W. Mercer, (1984).

objective standard of liability based on scientific evidence of a driver's blood alcohol concentration (BAC). After the introduction of widely publicized per se criminal sanctions in Britain in 1967 and Canada in 1969, reductions in alcohol-related fatal accidents were observed in both countries, although they eventually returned to original and indeed higher levels.[32] These reductions can be explained as a product of drivers increased perceptions of the risk of punishment if they drove after drinking. They failed in the long-run because the perception of risk eventually wore off reflecting more realistic perceptions of the probability of apprehension and punishment. The introduction of per se laws in both countries did not increase the severity of punishment, and in many contexts reduced it. Moreover, studies tend to suggest that the number of drunk driving charges, within some range, is not related to reductions in alcohol-related accidents and that the arrest rates can be doubled without necessarily reducing alcohol-related accidents.[33] This may in part, reflect a low likelihood of

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32 H.L. Ross, (1973); B. Carr et al., (1975) 679 at 683; L.W. Chambers et al., (1975) 689 at 693. Similar results were observed after Maine's passage of a per se sanction: R. Hingson et al., (1987).

33 During the Phoenix ASAP, arrests for drunk driving were increased between 60 and 75 per cent, yet only 29 per cent of a sample interviewed believed that their chances of being stopped by the police after drinking and driving were high. These perceptions were, in fact, realistic, as, even during peak enforcement, drunk driving arrests represented only 2.9 per cent of the estimated number of all the licensed drivers in the city. See T. Clay and P. Swenson, (1978) 134, 136; W. Mercer, (1984) 119; W. Mercer, (1985).

apprehension (estimated in some studies to be as low as only one chance in approximately every 500 to 2000 impaired trips), even during peak enforcement activity.[34] Studies suggest that most drunk driving blitzes, such as Toronto's Reduce Impaired Driving Everywhere (RIDE) programme or Alberta's CHECKSTOP programme, which uses spot checks involving random stopping and questioning of drivers, does not seem to result in less drunk driving, as measured by the percentage of randomly selected drivers with illegal BAC's, or significant reductions in reported accidents.[35] This finding seems also consistent with the well-known evaluation by H.L. Ross of the Scandinavian experience.[36] On the other hand, one enforcement technique that seems to increase more durably perceptions of the likelihood of apprehension is extensive use of random breath testing. When such testing was introduced in the Australian state of New South Wales, approximately one million breath tests were administered to a driving population of three million during each of the first three years of its implementation. The programme was also accompanied by extensive publicity designed to emphasize the

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34 Liban et al., (1987) at 164; R. Borkenstein, (1982), H.L. Ross, (1989). A Canadian study based on night-time roadside surveys estimated the risk of apprehension to be 1 in 514 impaired trips or 1 in every 2,575 impaired kilometres: J. Lawson, as quoted in E. Vingilis and V. Vingilis, (1987) 22. One American study assessed the probability of arrest to be 1 in 200 impaired trips but was based on the unrealistic assumption that all available police officers will watch for drunk drivers: G. Beitel et al., (1975) 36.

35 Liban et al., at 165ff.

36 H.L. Ross, (1984); H.L. Ross, (1975).

certainty and severity of punishment. Recent evaluations of the programme suggest that over the first three years of its implementation, fatal accidents involving alcohol were reduced on average 21% each year, and fatal accidents between 11:00 p.m. and 3:00 a.m., a high risk period for drunk driving, were reduced by over 40%.[37] In terms of sanctions, the most effective sanction appears to be significant license suspensions,[38] rather than mandatory jail sentences or expensive long term educative or rehabilitative treatment.[39] License suspension operates primarily by reducing driving activity but it may also increase the care taken when suspended offenders continue to drive illegally.

However, beyond a sanction-oriented approach, as we will see below, raising the minimum drinking age seems to reduce alcohol-related accidents among the affected age groups, and use of less punitive compliance strategies that enlists the aid of commercial and social servers of alcohol, parents and employers in preventing drinking and driving seems to have some promise. Moreover, some attention to environment-centred factors seems warranted. For example, various forms of roadway and vehicle design features seem to have some potential for reducing both frequency and severity of alcohol-related traffic accidents. For

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37 J. Kearns et al., (1987) 429-30. For a very useful survey of random breath testing in Australia and other issues relating to traffic accidents, see R. Homel and P. Wilson, (1987).

38 R. Hagan, (1978).

39 P. Saltzberg and S. Paulsrude, (1984); R. Voas, (1986).

example, road design features such as raised rumble strips on median lines may prevent accidents, as they counter the depressive effects of alcohol on the senses of drivers. One California study suggests that placement of large "Wrong Way - Go Back" signs on both sides of off ramps facing wrong way drivers can be very effective in reducing wrong way crashes, the majority of which are alcohol-related.[40] Automobile design features that lessen the severity of injuries will, of course, reduce the damage sustained in alcohol related accidents, especially because those impaired by alcohol seem more susceptible to trauma.[41] Breath test or performance interlocks can now be added to vehicles, either to prevent driving or to trigger an automobile's lights and horn as a warning if a car is driven after the driver has failed a preliminary or performance test.[42] The costs and political hazards of mandating any design features that reduce mobility are formidable,[43] but such interventions can reduce exposure of drunk drivers and their victims to harm without relying on preventing the combination of drinking and driving through sanctions alone.

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40 I. Johnston (1987). See also T. Ranney and V. Gawron, (1986).

41 T. Anderson and D. Viano (1987).

42 See Voas, (1988) 334ff. Nine American states have laws authorizing judges to require ignition interlock devices: Status Report 24 no.1 (28 January 1989).

43 See J.L. Mashaw and D.L. Harfst, (1990).

III LICENSING

Licensing is a flexible form of administrative regulation that can be used to impose closer surveillance on conduct and to demand higher standards of conduct than can be obtained through the use of criminal or civil sanctions alone. Licensing techniques can be used in the traffic safety context to control the entry of drivers, to survey and record driver misconduct, and to control and sanction driving activity. Licensing, as a means both to control entry and to enforce exit in response to post-licensing behaviour, is related to the use of education to influence driver behaviour. Education can be required as a condition of obtaining a license and as a post-licensing treatment under the threat of license suspension.

A major set of licensing and related policies pertain to young drivers, particular teenagers. The following graph, which describes the Alberta experience but which is representative of most other industrialized societies,depicts the extent to which young drivers, both male and female, but particularly male, are over-represented in traffic accident statistics.

AGE AND SEX OF DRIVERS INVOLVED IN CASUALTY COLLISIONS, Alberta 1989 COLLISION RATE PER 1000 LICENSED DRIVERS

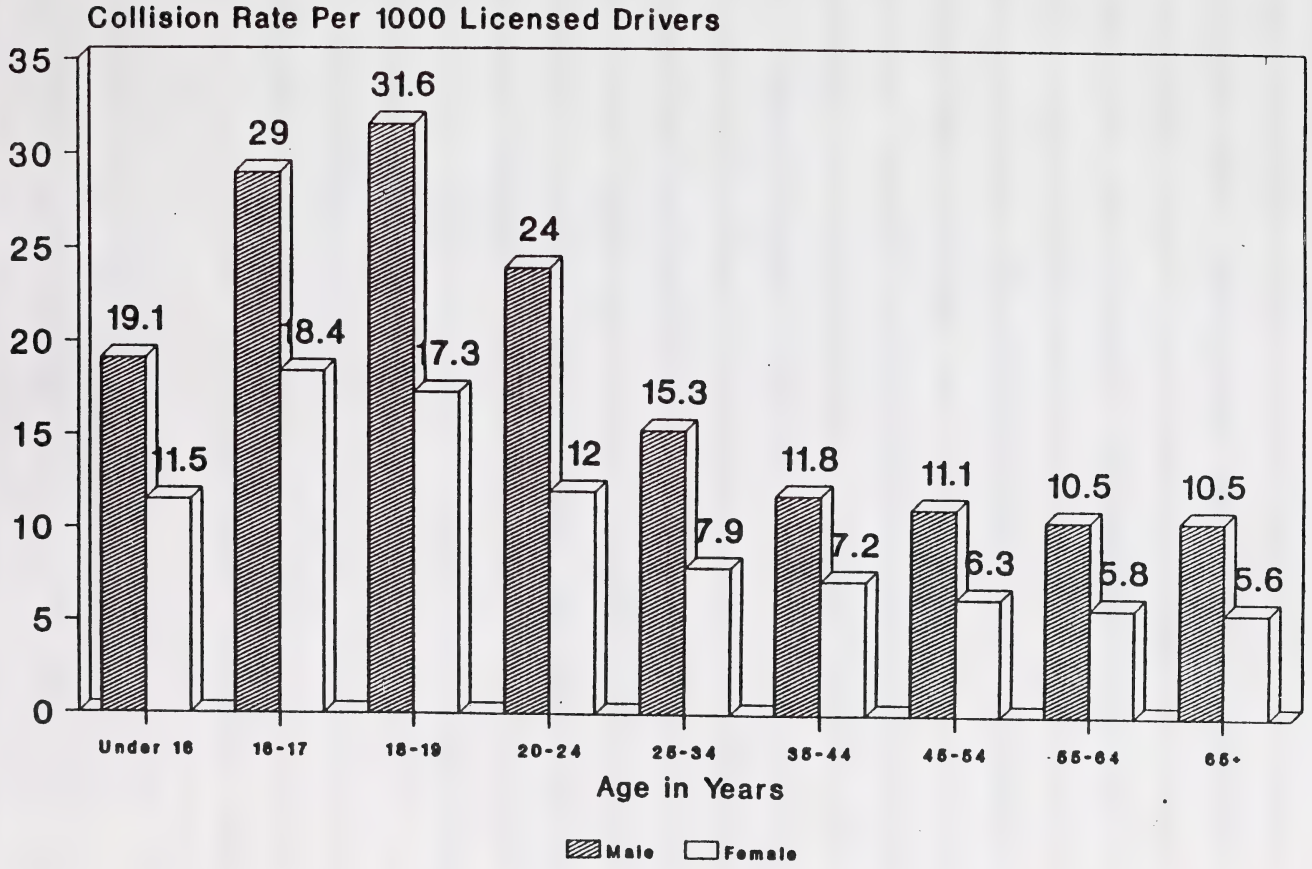

Figure 5

It is not clear whether the over-representation of young drivers in accidents can be explained primarily through their inexperience with driving or through behavioural and environmental facts such as aggression, immaturity and peer pressure specific to young people. To the extent that driving inexperience contributes to young drivers' accidents, interventions that reduce teenage driving exposure will have substantial offsetting effects through postponement of driving experience. To the extent that immaturity and related factors such as desire for and perceptions of risks[44] contribute to young drivers' accidents, interventions that limit teenagers' exposure will be more effective in reducing traffic accidents by preventing or reducing the driving activity of some of our most dangerous drivers. It is likely that both the inexperience and immaturity hypotheses have some explanatory value. Thus, interventions that target young drivers can prevent accidents, but there will be some offsetting effects when teenagers begin to drive at an older age.

Not surprisingly, the empirical evidence seems to indicate that raising the minimum age for obtaining a driver's license can significantly reduce traffic accidents in the age group that cannot obtain a license and while there will be some increase in

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[44] See B.A. Jonah, (1986) and R. Naatanen and H. Summala, (1976) 91-9 on the role that young drivers' desires and perceptions of risk play in traffic accidents. See D. Stewart and R. Sanderson (1984) 12, on the disproportionate accident risk for both young drivers and inexperienced drivers with less than eleven years of driving experience; see generally M. Wilson and M. Daly, (1985); W. Wiegers, (1989).

traffic accidents at the higher age threshold, this seems unlikely to offset the safety gains through restricting the driving activities of younger drivers.[45] Research also seems to indicate that there are considerable potential safety gains through graduated licensing programmes that impose strategic restrictions on the driving of all new drivers and that do not focus only on those who are recorded by the police as involved in convictions or accidents.[46] Driving restrictions under such graduated licensing programmes can include night-time and/or weekend curfews, requirements that adults accompany young drivers, prohibitions on young drivers transporting other teenagers, and lower levels of prohibited blood alcohol concentrations or fewer moving violations or demerit points as a trigger for license suspension for young drivers.[47]

Although some studies suggest that those who take high school driver education have fewer accidents than those who do not, most studies find that aggregate increases in high school driver education are associated with increased licensing of young drivers and increased accidents amongst this age group.[48] High school driver education, by facilitating early licensing, results in more young people being exposed to the risks of driving

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45 A. Williams et al., (1983).

46 See generally, D.R. Mayhew and H.M. Simpson, (1984).

47 D.F. Preusser et al., (1984); A.J. McKnight et al., (1984) as reported in Mayhew and Simpson (1984); L. Robertson, (1981).

48 L. Robertson and P. Zador, (1978); A. Lund et al., (1986).

without the educational programmes supplying them with skills that compensate for the accident risks presented by their increased exposure. For example, when driver education was no longer offered in some Connecticut high schools, a 75% reduction in the licensing of 16 and 17 year olds was observed, with a similar reduction in reported accidents among that group.[49] The skills that young drivers learn in driver education e.g. parallel parking, are probably more helpful in passing road tests for licensing than they are in avoiding accidents e.g. actual driving in poor weather.

With respect to the legal minimum drinking age, the consensus of empirical studies has been that the reductions made in the drinking age in the U.S. in the 1970's were associated with increases in youthful traffic fatalities,[50] and that conversely recent increases in the minimum legal drinking age have reduced automobile accidents among affected groups.[51] While it has been argued that a higher drinking age merely postpones the dangerous period in which inexperienced drinkers drive,[52] the body of the empirical evidence does not support the view that the safety gains are by any means fully offset.

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49 L. Robertson, (1980).

50 P. Cook and G. Tauchen, (1984); see also P. Whitehead et al., (1975); G. Bako et al., (1976); C. Liban et al., (1987) 159 at 169ff. See generally A. Wagenaar, (1983).

51 A. Williams et al., (1983); M. DuMouchel et al., (1987); H. Saffer and M. Grossman, (1987).

52 M. Males, (1986).

As to post-licensing control, the empirical evidence as to the efficacy of warning letters for drivers with poor records of traffic violations[53] and/or driver improvement courses required as a condition of license continuance is relatively unconvincing.[54] In a wide range of contexts, license suspension appears to be the most effective intervention. License suspension acts as an effective traffic safety measure through the threat of its imposition, by reducing driving activity and perhaps even by increasing the care that a suspended driver takes when driving illegally. Greater attention should probably paid to the use of short-term license suspensions. By reducing the severity of license suspension, this intervention can be imposed more frequently on a wider range of drivers. In most evaluated studies, license suspensions have proved more effective in reducing accidents than more costly educational or rehabilitative programmes.[55] However, it is important not to overstate the likely impact on accident rates of license suspension regimes. For example, licensing demerit point systems which attempt to identify drivers who present an above-average accident risk nevertheless only apply to a small minority of drivers who are likely to have accidents in the future. For example, one study of prior violations of a sample of drivers

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53 R. McBride and R. Peck, (1970); A. Donelson and D. Mayhew, (1987) 33ff.

54 A. Lund and A. Williams, (1985).

55 D. Preusser et al., (1976); R. Peck et al., (1985).

fatally injured in automobile accidents found that more than 50% had no traffic convictions in the three years prior to the fatal crash and that an additional 25% had only once such conviction. Only 5% of those fatally injured had more than three convictions.[56] In another study, it was found that three male drivers with multiple convictions would have to be removed from the road for three years in order to prevent one accident, and 4.4 similar female drivers would have to be removed to prevent one accident over the same period.[57] Thus, again, it is important to stress the difference between sanctions that change behaviour (which the threat or actuality of license suspension clearly does), and the effect of sanctions on the accident rate.

IV REWARDS

Rewards have not been widely used as a form of intervention designed to induce changes in driving behaviour. However, some empirical studies suggest that providing incentives for seatbelt

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56 L. Robertson and S. Baker, (1975).

57 R.C. Peck et al., (1970), 243 at 272. Likewise, Burg, in a study of California drivers, concluded that if all drivers with one or more accidents in a three-year period were removed from the road, 19.8 per cent of all drivers would be removed in order to eliminate 29.6 per cent of accidents over the second three-year period. If only drivers with two or more accidents were removed, 3.9 per cent of all drivers would be taken off the road to eliminate 8.0 per cent of all accidents over the next three years; if all drivers with three or more accidents were removed, only 0.08 per cent of drivers would be affected but only 2 per cent of accidents would be prevented. See A. Burg, (1970) at 63. These calculations are based on the assumption that no driving will occur during the period of suspension, whereas it is known that many drivers will suspended licences continue to drive.

use, such as signing pledge cards and becoming eligible for a chance at a sweepstake prize significantly increases usage rates.[58] Also, some mixed evidence suggests that providing a free one year extension of a driver's license if there have been no accidents or violations the previous year reduces the accident rate among the affected group.[59] It has also been suggested that safe driving could be linked with state or provincial lotteries by a province or state for example giving a violation-free or accident-free driver one or more lottery tickets, perhaps upon license renewal. While this evidence is fragmentary, psychological theory generally supports the view that the availability of small incentives for behavioural changes operate as forms of positive reinforcement and over time induces internalization of the desired behavioral changes.[60] There seems to be room for potentially productive experimentation with a range of reward-oriented techniques in the traffic safety field in addition to penalties and sanctions.

V MOTOR VEHICLE SAFETY DESIGN

With the enactment by the U.S. Congress of the National Traffic and Motor Vehicle Safety Act of 1966, which created what has become the National Highway and Traffic Safety Administration

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58 J.G. Cope, W.F. Grossnickle, and E.S. Geller, (1986) 250.

59 G.J.S. Wilde and P.A. Murdoch, (1982) at 884-5; R. Harano and D.E. Hubert, 1974.

60 G.J.S. Wilde and P.A. Murdoch (1982); see also Wilde, (1986) at 388ff.

(NHTSA), whose first administrator was William Haddon, a range of safety standards have been promulgated for new motor vehicles. Some of the standards are directed to reducing the frequency of accidents, while others are directed to reducing their severity. Six major occupant protection categories account for roughly two-thirds of the cost of safety regulation (excluding the bumper standard, which is mostly intended to reduce motor vehicle body damage): interior protection (e.g. padded dashes), head restraints, energy absorbing steering systems, penetration resistent windscreen glass, seatbelt installation, and side door beams. Dual breaking systems account for most of the cost of the accident prevention standards. These seven categories of standards cover more than three-quarters of the entire cost of safety regulations imposed by NHTSA (excluding bumper standards).[61] In recent years, NHTSA has increasingly shifted its emphasis from regulation by standards to regulation by recalls, in part because of difficulties encountered in justifying technology-forcing standards on judicial review and despite the dubious safety returns from mass recalls.[62]

A number of NHTSA assessments and external studies,[63] typically undertaken by engineers, have attempted to estimate the savings in fatalities and bodily injuries from these standards.

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61 R.W. Crandall, H.K. Gruenspecht, T.E. Keeler, and L.B. Lave, (1986), 51.

62 See J.L. Mashaw and D.L. Harfst, (1987); Mashaw and Harfst, (1990).

63 Discussed in J. Claybrook and D. Bollier, (1985).

Substantial savings have generally been reported and have been relied upon as vindicating the effectiveness of this class of safety countermeasure. However, as noted early, a major challenge to the conceptual and causal discreteness of the categories of first and second collisions, or pre-crash, crash, and post-crash phases of accidents, which provided the epidemiological underpinning for MHTSA's standard-setting mandate, was posed by Sam Peltzman, a University of Chicago economist in a highly controversial article published in 1975.[64] Peltzman postulated that by reducing the consequences of the second collision i.e. the severity of an accident, through safety regulations, driving intensity would be increased as drivers took more risks in order to achieve the same trade-off that they had demanded prior to regulation between expected accident costs and benefits from conserving time on the road. This hypothsis reflects the theory of risk compensation or risk homeostasis that continues to agitate traffic safety research over a broad range of issues.

Peltzman set out to test his hypothesis empirically in two ways. First, a time series analysis was undertaken whereby an equation was fitted to fatality data from 1944 to 1964. Extrapolating from the variables that appeared best to explain fatality rates over this period, Peltzman predicted fatality rates over subsequent years in the absence of motor vehicle safety regulation. His predicted fatality rates almost exactly

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64 S. Peltzman, (1975).

tracked the actual fatality rates with vehicle safety regulation. While occupant fatality rates fell somewhat, fatality rates for pedestrians, motor cyclists, and cyclists rose by an equivalent amount. Increased driving by young drivers and an increased incidence of drunk driving offences are identified by Peltzman as evidence of increased risk taking offsetting reduced costs of accidents. Cross-sectional analysis was also undertaken by Peltzman to test whether states with a higher proportion of newer cars with mandated safety features reported lower fatality rates than states with a higher proportion of pre-regulation vehicles. No such effect was found.

Peltzman's findings have been strongly contested by other researchers. The latest study of the impact of motor vehicle safety regulation on fatality and injury rates, recently published by the Brookings Institution and undertaken by Crandall, Gruenspecht, Keeler, and Lave,[65] raises serious doubts about Peltzman's hypothesis, at least in its limiting form, while acknowledging more modest risk compensation effects. While the study reaches harsh judgment on the net economic effects of fuel efficiency and emission regulations, it reaches a highly favourable conclusion on the effects of safety regulation, finding that regulation may have reduced fatalities by as much as 40% since the inception of the programme and may entail an annual reduction of fatalities of as many as 23,000 - substantially higher than most previous positive studies had claimed. Having

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[65] Crandall et al. (1986).

discovered positive and substantial benefits from safety regulations the Brookings researchers then investigated whether benefits exceeded costs - irrelevant in Peltzman's analysis, given a finding of zero benefits. They found that benefits substantially exceeded costs, except on the most pessimistic estimates of benefits and costs. They acknowledge that their data suggests only that total benefits appear to be greater than the total costs of safety improvements in cars, not that the marginal benefits of every safety regulation exceed its marginal costs. With respect to airbags, they estimate annual costs to be between $2.1 billion and $4.2 billion and benefits to occupants between $3.3 billion and $16.2 billion. Blomquist criticizes these and similar estimates for failing to take account of risk compensation effects, and to place a cost on time, inconvenience, and disutility associated with use of the system, and thus concludes that estimates of net social benefits are substantially over-stated.[66] Nevertheless, as noted earlier, passive restraint systems for front-seat occupants will become mandatory in the U.S. by 1993 unless there are further delays in implementation.

VI HIGHWAY SAFETY DESIGN

The design of highway systems obviously entails a complex

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[66] G.Blomquist, (1987), chapter 4.

mix of objectives. Historically, traffic engineers have seen as their first priority designing highway features that produce and maintain a smooth flow of traffic so that highway systems can move as large a volume of traffic as possible as quickly as possible.[67] Over the past two decades or so, much more attention has been paid to safety features of highway design. This appears to parallel the increased focus on vehicle design and to reflect the influence of views, such as those of Haddon, who have maintained that historically public policy has been excessively preoccupied with attempts to influence driver behaviour. Obviously, myriad features of highway design and maintenance may affect highway safety - road surface, road width, gradient, radius of curves, number of lanes, turning lanes, median strips, width of shoulder, run-off areas, lighting, stop signs, snow clearance, and so on. More than fifty highway design and maintenance elements have been identified as having some type of safety relationship.[68]

In a trenchant critique of road safety design - both the established road system and new additions to it - Hauer argues that its history has been characterized by "a reign of ignorance".[69] Hauer is highly critical of the tendency of

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67 G.M. MacKay, (1982).

68 K.C. Sinha and K. Hu, (1986) 31. For a detailed review of research on highway safety design, see US Department of Transportation, Federal Highway Administration, (1982); see also OECD, (1986), chapter 12.

69 E. Hauer, June 1987; Hauer, (1988).

traffic engineers to follow established manual guidelines uncritically and to avoid independent (non self-interested) empirical evaluations of particular safety treatments, thus avoiding the risk that present practices may have to be changed radically and the existing stock of highways suddenly declared sub-standard. Even where findings indicate a positive relationship between safety and particular highway improvements, these do not account for the costs of these improvements. Given a limited budget available for expenditures on highway improvements, it is obvious that not all improvements that may reduce accident rates can be undertaken. Choices must be made; a system of priorities must be established. In identifying particular design problems or potential problems, typically efforts are made by highways engineers to identify locations exhibiting an abnormally high level of accidents. Merely counting accidents is likely to turn up mostly high density areas of highway, relative to lightly travelled stretches of highway. Obviously abnormally high must be defined relative to some index in order to be meaningful. Typically, the index will be accidents per hundred million vehicle miles or, in the case of intersections, per million entering vehicles across the provincial highway system, to which a similarly defined accident rate in the location in question can be compared.[70] This so-called "black-spot" approach to location identification sets priorities solely by reference to relative accident rates, thus

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[70] S.R. Lynch, (1986) 80-4; M.J. Stelzleni, (1986), 152-8.

ignoring relative costs of reducing accident rates in different locations. In addition, the abnormally high level of accidents in the period under scrutiny may be largely a random event or be explained by transitory factors e.g. such as weather or construction in the area, and not carry any larger significance.

These difficulties in problem identification aside, a formal approach to the choice of optimal solution to the problem is likely to involve some form of cost-benefit analysis. Quantifying all the costs and benefits, direct and indirect, of any proposed solution to a problem location is obviously a daunting and often speculative exercise, especially with respect to benefits, which entails placing monetary values on intangibles like life and limb. A different limitation on the utility of cost benefit analysis is the partial context in which it is typically employed - the choice of optimal solution to a given high priority problem i.e. an identified black-spot. Ideally, all possible safety improvements in the entire traffic safety system should be simultaneously evaluated to determine how a predetermined budget for safety improvements can be invested so as to maximize the net present value of the resources to be invested. Perhaps, for example, in this more general or system-wide analysis, a large number of small improvements across the system would generate a higher net present value. These options seem unlikely to be revealed by the partial analysis of choice of solution to a pre-identified high priority problem. However, this kind of system-wide analysis is scarcely feasible every time

a budgetary allocation must be made, or perhaps ever, given the formidable information demands that it implies.

In an ideal budgetary allocation process, ex ante estimates of costs and benefits should be informed by prior experience with similar interventions and should be validated by subsequent assessment of the actual impact of the solution chosen in the case in hand, so that estimates of likely effects in future cases may be revised appropriately. A number of methodological problems have been encountered in evaluation studies and partly account for divergent assessments of the impact of particular types of counter-measure.

Hauer has pointed out many time series studies tend to overestimate the impact of particular safety improvements because of regression to the mean. In other words, the post safety improvement reduction in e.g. fatalities may simply be a regression to the prior mean, and the increase in fatalities prior to the safety improvement may have simply been a random event.[71] Errors may be perpetuated or extended as illusionary safety gains become the basis for generalized road design guidelines that traffic engineers subsequently rely on in treating other accident sites. Cross-sectional studies that compare accident rates at various sites that are subject to different counter-measures and that are designed to evaluate the relative effectiveness of these different measures may yield

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[71] E. Hauer, (1980); see also C. Abbess, D. Jarrett, and C.C. Wright, (1981) 535-42.

distorted results reflecting selection bias if prior conditions, including accident rates, at each site are not adequately accounted for. For example, in comparing the effectiveness of four-way with two-way stop signs, while accident rates in the former case may prove higher than in the latter, this may not imply lesser effectiveness of the former, but rather the more severe nature of problem that led to the installation of four-way stop signs in the first place. Finally, in evaluating the impact of a counter-measure on the accident rate at particular treatment site, it may be important to take account of countervailing effects elsewhere in the highway system i.e. an "accident migration" effect. For example, one study found that while conversion of two-way to four-way stop signs in Philadelphia led to a 50% reduction in accidents at intersections controlled by four-way stop signs, the accident rate at other intersections in the area under study increased correspondingly.[72] Risk compensation or homeostasis proponents, such as Adams, rely on studies such as this to argue that highway safety improvements, like motor vehicle safety improvements, are likely to be largely consumed by drivers as performance improvements as they reinstate prior target levels of risk in their driving behaviour.[73] However, if vehicle safety regulations and highway safety improvements are ruled out as contributors to the dramatic secular decline in fatality rates in many industrialized

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72 G.M. Ebbecke and J.J. Shuster, (1977) 644.

73 J.G.U. Adams, (1985), chapter 4.

countries (of the order of 3 to 4% a year on average over 40 years), this places an especially strong burden on proponents of the risk homeostasis hypothesis, like Adams and Peltzman, to offer convincing alternative explanations. To date, this burden remains undischarged.

VII POST-ACCIDENT INJURY CARE

The final step in traffic safety counter-measures occurs after every other step has failed: the vehicle design did not avoid, or insulate the occupant from the impact, of the crash; the road design did not accommodate the error; and the driver failed to avoid it. Yet, even at this point, there is still room for intervention as emergency care and rehabilitation may mitigate the consequences of the accident.

The acceptance of emergency treatment as a large scale project for the lowering of fatalities resulting from trauma has a long military history. This experience has also influenced treatment of traffic accident victims and has increasingly redirected attention away from first-aid treatment at the site of the accident to trauma centres and rapid transportation of the victim to these centres. The expression used by trauma care personnel is "the golden hour", referring to the critical one hour period following injury. If an accident victim can be transported to a hospital or trauma centre within that time, chances of survival are considered excellent.[74] For example,

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[74] H. Mitchell, (1968).

in San Diego County, California, a study revealed that 13.6% of fatalities were preventable and that treatment of major trauma victims was sub-optimal in 32% of cases. After introduction of a trauma system in the county a check was done by the same audit group. The preventable death rate dropped to 2.7% and sub-optimal care was found in only 4.2% of cases.[75] Another study recently completed in Orange County, California, found that the preventable death category fell from 73% to 4% when patients were taken to a trauma centre rather than an conventional hospital.[76] While there has been little effort made to assess whether the costs of providing elaborate trauma services justify the benefits, some estimates claim that if the U.S. were to establish a system of trauma centres similar to that which West Germany has set up along it main autobahns since the early 1970's, where 90 per cent of the population is within fifteen minutes of a trauma centre, benefits would substantially exceed the costs.[77]

Long-term rehabilitation, including physical, vocational, and emotional rehabilitation is the second aspect of post-crash care strategies. Rehabilitation attempts to restore the victim as closely as possible to the quality of life-style enjoyed before the accident. Two observations seem to emerge from existing empirical studies. First, for seriously injured

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75 Shackford et al (1986).

76 D.D. Trunkey, (1983) 249.

77 Ibid.

accident victims, rehabilitation is likely to be very expensive. Second, it is likely to achieve substantial improvement in only a minority of cases.[78] Obviously, in those cases, the expenditures are likely to be worthwhile. It is often argued that governments have insufficiently invested in the provision of appropriate rehabilitation facilities that fully address physical, vocational, and emotional needs of injury victims.

VIII THE ALBERTA TRAFFIC ACCIDENT PROFILE

In the light of the foregoing review of traffic safety policies, Alberta Traffic Collision Statistics collected by Motor Transport Services of the Alberta Department of Transportation and Utilities and compiled from police accident reports are suggestive of where traffic safety priorities might be focused.

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78 US Department of Transportation, (1985) 107-12.

Table 1.1

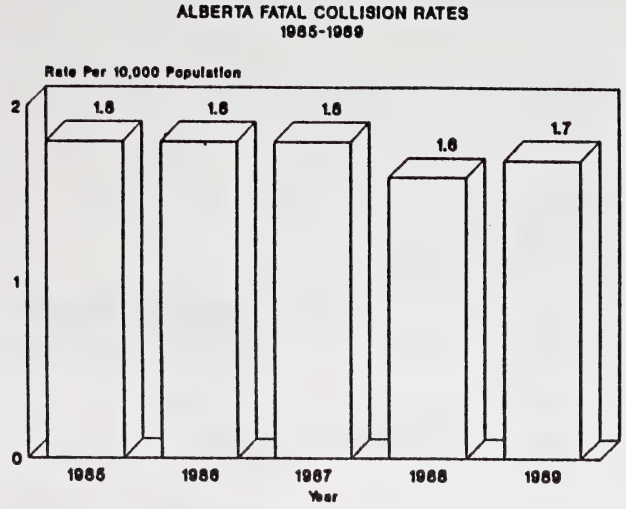
Alberta Traffic Collisions

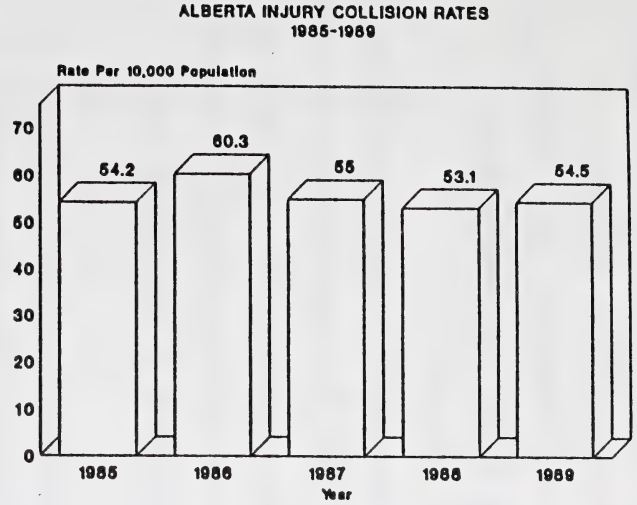
1985-89

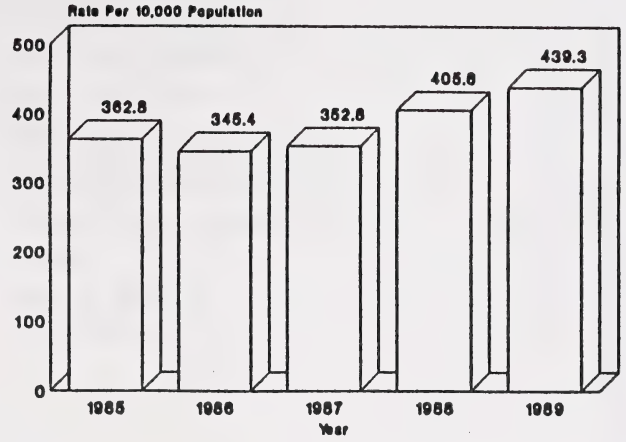
Severity of Collision	**1989**	**1988**	**1987**	**1986**	**1985**
Fatal Collisions	408	395	425	430	432
Non-Fatal Injury Collisions	13234	12728	13088	14383	12738
Property Damage Only Collisions	106722	97141	83980	82372	85224
TOTAL Reportable Collisions	**120364**	**110264**	**97493**	**97185**	**98389**
Number Killed	487	464	510	523	533
Number Injured	19753	18777	19809	22148	19855
TOTAL Number of Casualties	**20240**	**19241**	**20319**	**22671**	**20388**

Table 1.1 provides aggregate Alberta traffic collision statistics for the five year period 1985-1989, showing a fairly stable pattern in fatal collisions and non-fatal injury collisions, but a dramatic increase in property damage only collisions and total reportable collisions.

These trends are shown graphically as traffic collision rates per 10,000 population in the following graphs.


ALBERTA FATAL COLLISION RATES
1985-1989
Rate Per 10,000 Population
2
1
0
1.8
1.8
1.8
1.6
1.7
1985
1986
1987
1988
1989
Year


ALBERTA INJURY COLLISION RATES
1985-1989
Rate Per 10,000 Population
70
60
50
40
30
20
10
0
54.2
60.3
55
53.1
54.5
1985
1986
1987
1988
1989
Year


ALBERTA PROPERTY DAMAGE COLLISION RATES
1985-1989
Rate Per 10,000 Population
500
400
300
200
100
0
362.8
345.4
352.8
405.6
439.3
1985
1986
1987
1988
1989
Year

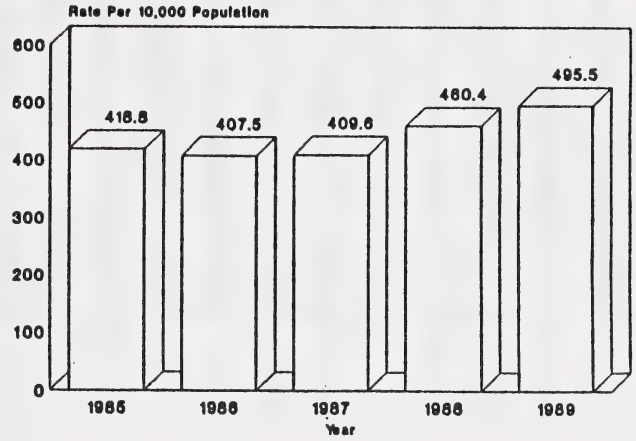

ALBERTA OVERALL COLLISION RATES
1985-1989
Rate Per 10,000 Population
600
500
400
300
200
100
0
416.8
407.5
409.6
460.4
495.5
1985
1986
1987
1988
1989
Year

Figure 1

In terms of provincial comparisons of casualty rates per 10,000 population, only one province - British Columbia - recorded a higher fatality rate than Alberta in 1989, although only two provinces - Prince Edward Island and Newfoundland - recorded a lower rate of non-fatal injuries.

The age and sex of drivers involved in casualty collisions expressed as a collision rate per 1,000 licensed drivers for 1989 were shown in an earlier graph. This graph reflects patterns in other jurisdictions with a heavy over-representation of drivers in the 16 to 24 age group and within that age group the heavy over-representation of males.

According to compilations from police accident reports, driver error or misjudgment was involved in 53.3 per cent of casualty collisions. The nature of these errors or misjudgments is shown below in Table 4.2

Table 4.2

ACTIONS OF DRIVERS INVOLVED IN CASUALTY COLLISIONS
1989

	Drivers in Fatal Collisions		Drivers Non-Fatal Injury Collisions		Total Drivers in Casualty Collisions	
Driver Actions	**N**	**%**	**N**	**%**	**N**	**%**
Driving Properly	274	42.2	9690	46.8	9964	46.7
Ran Off Road	88	13.6	1444	7.0	1532	7.2
Failed to Observe Traffic Control Device	54	8.3	1255	6.1	1309	6.1
Unsafe Speed	42	6.5	1221	5.9	1263	5.9
Following Too Closely	8	1.2	1203	5.8	1211	5.7
Left Turn Across Path	17	2.6	1053	5.1	1070	5.0
Failure to Yield Right-of-Way	25	3.9	1011	4.9	1036	4.9
Left of Centre	70	12.2	248	1.2	327	1.5
Improper Turn	3	0.5	323	1.6	326	1.5
Improper Passing	13	2.0	135	0.7	148	0.7
Backed Unsafely	-	-	130	0.6	130	0.6
Failed to Signal	-	-	15	0.1	15	0.1
Other	38	5.9	2522	12.4	2560	12.0
TOTAL Number of Drivers	**649**	**100.0**	**20701**	**100.0**	**21350**	**100.0**

For aggregate statistics covering both fatal and non-fatal injury collisions, running off the road, failing to observe traffic control devices, and travelling at unsafe speeds were the most frequently identified driver actions contributing to casualty decisions. However, if one looks at the statistics for fatal collisions, running off the road, unsafe speed, and driving left of centre are much more prominent factors. One might tend to infer that all three, but particularly the first and the third, are likely to be highly correlated with drinking and driving. For total casualty collisions, if one aggregates failure to observe traffic control devices, failure to yield right of way, and left turn across path, intersection violations assume considerable significance.

Table 6.1 below shows the location of collisions for 1989.

Table 6.1

LOCATIONS OF COLLISIONS
1989

	Fatal Collisions		Non-Fatal Only Collisions		Property Damage Collisions		Total Collisions	
Driver Actions	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Urban	123	30.1	9436	71.5	87696	82.2	97255	80.8
Rural	285	69.9	3798	28.7	19026	17.8	23109	19.2
TOTAL Number of Collisions]	**408**	**100.0**	**13234**	**100.0**	**106722**	**100.0**	**120364**	**100.0**

The striking feature of these statistics is the high percentage of fatal collisions that occur in rural areas - presumably often implicating the two factors noted in the previous Table.

Figure 8 below shows the degree of involvement of drinking drivers in casualty collisions from 1985-1989.

INVOLVEMENT OF DRINKING DRIVERS IN CASUALTY COLLISIONS Alberta, 1985-1989

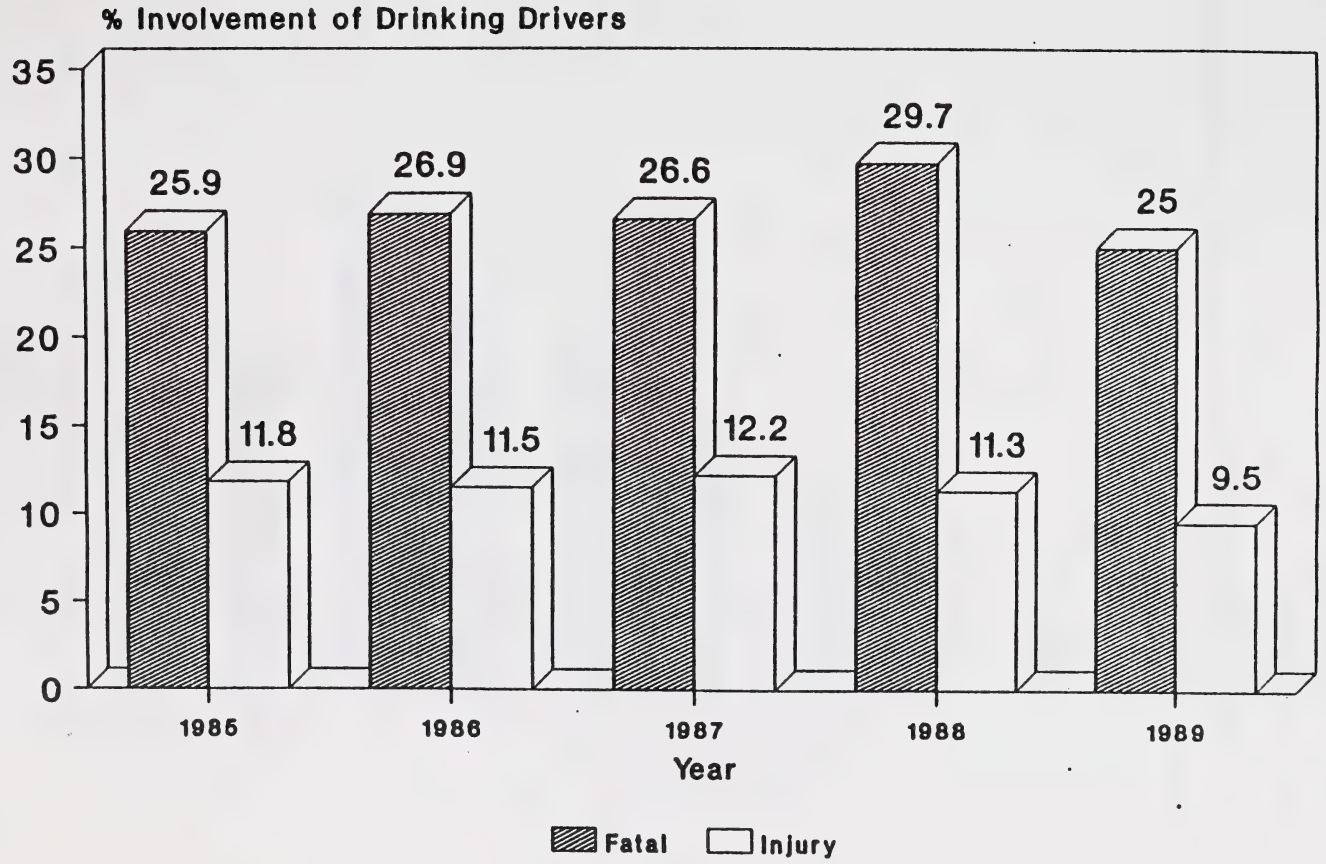


Figure 8

It will be observed that in almost 25 per cent of fatal collisions, drinking drivers were involved and this percentage has not significantly declined over the five year period from 1985 to 1989.

Figure 10 shows alcohol-involved casualty collisions by age and sex of drinking drivers for 1989:

AGE AND SEX OF DRINKING DRIVERS INVOLVED IN CASUALTY COLLISIONS, Alberta 1989 COLLISION RATE PER 1000 LICENSED DRIVERS

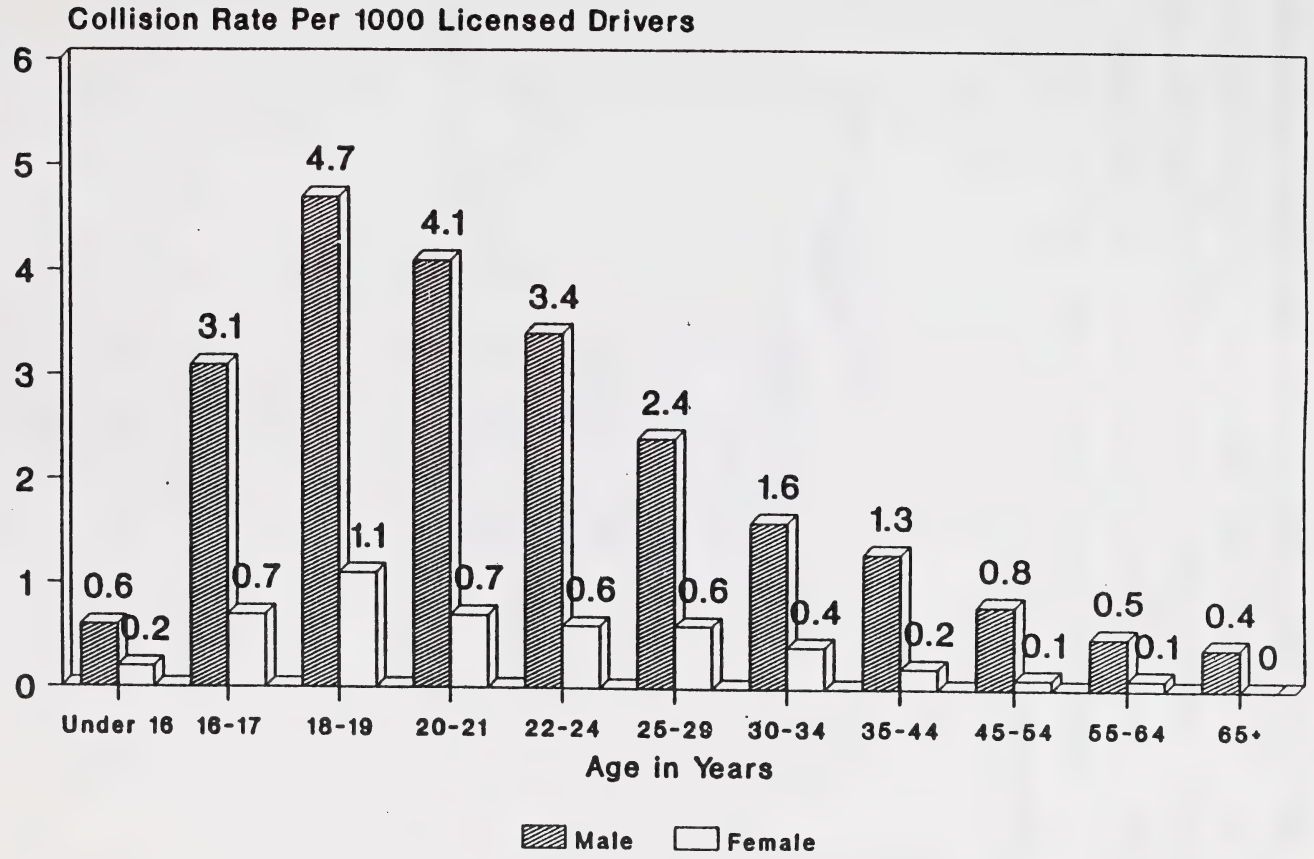
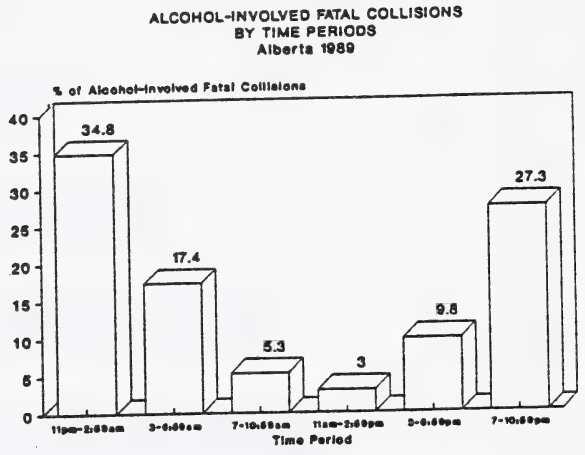


Figure 10

Of those collisions involving drivers who had consumed alcohol, there were five and a half times as many male drivers as female drivers. The majority were male drivers under the age of 30. In terms of involvement per 1,000 licensed drivers, males 18 to 21 years of age are more likely to have consumed alcohol prior to a casualty collision than any other age group.

Figure 11 below shows alcohol-involved fatal collisions by time period for 1989:



The following two tables from annual reports by the Alberta insurance industry to the Insurance Bureau of Canada provide summary statistics on auto insurance claims for the period 1984-88:

Table IV

ACTUAL LOSS RATIO EXPERIENCE

PRIVATE PASSENGER AUTOMOBILE - EXCLUDING FARMERS

ALBERTA

COVERAGE	POLICY YEAR	CARS INSURED (1)	ACTUAL PREMIUMS EARNED (2)	LOSSES AND LOSS ADJUSTMENT EXPENSES INCURRED (3)	CLAIM FREQ. PER 100 CARS INSURED (4)	AVGE. COST PER CLAIM (5)	RATIO OF LOSS & LOSS EXPENSE TO PREM. EARNED (6)	NUMBER OF CLAIMS (7)
BODILY INJURY AND PROPERTY DAMAGE	'84	1,126,284	201,710,447	146,290,566	5.3	2,445	73	59,822
	85	1,144,319	196,188,728	180,588,871	5.7	2,787	92	64,790
	86	1,207,510	209,120,911	223,562,717	5.7	3,256	107	68,654
	87	1,235,382	220,890,866	232,868,951	5.4	3,467	105	67,163
	88	1,259,613	230,736,938	251,259,439	5.4	3,696	109	67,988
MEDICAL PAYMENTS	'84							
	85							
	86							
	87							
	88							
ACCIDENT BENEFITS (EXCL.MED.)	'84	1,118,870	15,059,031	10,112,311	.6	1,410	67	7,170
	85	1,137,112	15,341,857	10,897,240	.7	1,402	71	7,771
	86	1,203,302	16,086,067	14,027,460	.7	1,620	87	8,659
	87	1,234,740	16,860,884	14,292,169	.7	1,577	85	9,062
	88	1,254,712	17,137,801	15,199,011	.8	1,563	89	9,723
ALL PERILS	'84	57,385	13,447,445	6,693,907	18.0	650	50	10,301
	85	55,474	12,453,142	7,782,310	23.8	589	62	13,212
	86	61,223	14,026,649	9,783,336	24.3	658	70	14,863
	87	64,266	15,141,531	13,892,695	29.1	742	92	18,723
	88	65,852	15,828,245	16,290,381	31.5	786	103	20,734
COLLISION	'84	750,662	125,677,514	75,324,099	7.1	1,409	60	53,463
	85	767,762	121,777,276	83,887,420	7.8	1,402	69	59,832
	86	808,060	129,055,174	94,659,580	8.0	1,473	73	64,244
	87	836,677	134,012,193	98,135,217	7.4	1,577	73	62,242
	88	854,573	137,397,688	114,290,646	7.7	1,739	83	65,711
COMPREHENSIVE	'84	739,920	60,762,474	47,747,130	16.8	383	79	124,560
	85	782,988	61,768,073	47,188,732	17.7	341	76	138,269
	86	846,413	67,028,045	51,420,048	16.3	373	77	137,739
	87	884,719	71,952,719	87,298,534	19.1	518	121	168,659
	88	920,178	75,189,084	88,401,001	18.8	512	118	172,592
SPECIFIED PERILS	'84	230,592	5,909,195	3,564,052	1.5	1,038	60	3,433
	85	208,448	5,168,286	2,496,293	1.3	904	48	2,761
	86	183,034	4,521,070	2,377,578	1.5	889	53	2,675
	87	161,179	4,065,282	4,808,839	3.0	989	118	4,860
	88	140,557	3,296,277	4,151,688	2.8	1,055	126	3,936
TOTAL	'84		422,566,106	289,732,065			69	
	85		412,697,362	332,840,866			81	
	86		439,837,916	395,830,719			90	
	87		462,923,475	451,296,405			97	
	88		479,586,033	489,592,166			102	

Table IX

PRIVATE PASSENGER AUTOMOBILES - EXCLUDING FARMERS
TREND OF LOSS COST EXHIBITS, THIRD PARTY LIABILITY

II. BODILY INJURY LIABILITY LOSS STATISTICS

	Policy Year	Number of Cars Insured (1)	Claim Frequency per 100 Cars Insured (2)	Average Cost per Claim (3)	Loss Cost per Car Insured (4)
ALBERTA	1984*	1,126,284	.53	12,314	65.32
	1984	1,136,334	.58	13,207	76.95
	1985*	1,144,319	.61	14,406	87.53
	1985	1,171,209	.62	15,714	98.09
	1986*	1,207,510	.65	16,747	109.16
	1986	1,227,314	.68	16,542	111.88
	1987*	1,235,382	.67	16,750	112.46
	1987	1,244,011	.68	17,064	116.10
	1988*	1,259,613	.68	17,290	117.86

PRIVATE PASSENGER AUTOMOBILES - EXCLUDING FARMERS
TREND OF LOSS COST EXHIBITS, THIRD PARTY LIABILITY

III. PROPERTY DAMAGE LIABILITY LOSS STATISTICS

	Policy Year	Number of Cars Insured (1)	Claim Frequency per 100 Cars Insured (2)	Average Cost per Claim (3)	Loss Cost per Car Insured (4)
ALBERTA	1984*	1,126,284	4.78	1,351	64.57
	1984	1,136,334	4.98	1,364	67.99
	1985*	1,144,319	5.05	1,391	70.28
	1985	1,171,209	5.09	1,447	73.74
	1986*	1,207,510	5.03	1,509	75.98
	1986	1,227,314	4.84	1,570	76.05
	1987*	1,235,382	4.77	1,596	76.05
	1987	1,244,011	4.74	1,665	79.00
	1988*	1,259,613	4.72	1,731	81.61

Policy years cover a fiscal-policy year statistical period; for example, "1988" consists of policies effected in the 12 months from July 1, 1987 through June 30, 1988.

The most striking fact to emerge from these tables is that both frequency and severity of bodily injury liability claims (not property damage liability, collision damage, or no-fault benefits) have dramatically increased over this period and account for most of the pressure on insurance costs.

A further dimension on bodily injury loss costs is dramatically illustrated from the table on page 144 below summarizing a random sample of 577 bodily injury claims in Alberta for 1990. Of the 577 claims, 10 large claims for serious injuries or fatalities (1.7% of the claims in the sample) accounted for almost 40% of total loss costs for the sample. Of these 10 claims, particulars provided by insurers disclosed that 9 of the 10 involved male defendants, 6 of these defendants were young males (aged 17, 18, 20, 21, 23, 24), 7 of the 10 claims arose out of accidents in rural settings and 5 involved alcohol impairment (3 of the 5 involving young males).

What do all these statistics tell us?

1. Over-representation of young drivers in the 16 to 24 age group in accident statistics is dramatic, and warrants serious consideration of various of the exposure-limiting strategies associated with graduated licensing reviewed earlier in this chapter (e.g. curfews, restrictions on transporting teenagers, requirement of an adult presence). As well, serious consideration needs to be given to raising the minimum legal driving age to e.g. 18 and the minimum legal drinking age to e.g. 21.

2. The heavy representation of drinking driver involvement in fatal accident collisions and the relative constancy of this statistic over time suggests that, despite programmes like CHECKSTOP, more needs to be done in this area. The Australian experience suggests that all drivers who are stopped as part of the CHECKSTOP programme should be tested at least informally for alcohol consumption e.g. with an alcohol sensor, prior to a formal BAC test. For such a programme to be effective, again the Australian experience suggests that it needs to be run year-round and needs to be accompanied with dramatic publicity emphasizing the nature of the programme and the consequences for drivers who are found to be over the legal limit. Again, the statistics on time of day and urban-rural locations where alcohol involvement in fatal collisions is found to be most frequently present suggest that targeting on the night-time hours, especially between 11:00 p.m. and 3:00 a.m., and rural highways, would be likely to have the greatest impact.

3. While the Alberta Traffic Collision Statistics do not

provide detailed numbers, the 1989 report notes (p. 74) that most of the fatally injured occupants were not restrained by seatbelts or other similar devices at the time of collision, although the majority of occupants who were restrained at the time of collision sustained only minor injuries. While Alberta has only recently introduced mandatory seatbelt use laws, it seems imperative that these be vigorous enforced and that enforcement policies to that end be accompanied by appropriate publicity. Enforcement should be primary and not secondary (i.e. not dependent on other violations); the CHECKSTOP programme could well be extended so that it focuses not only on drinking drivers but on drivers who have not buckled-up.

4. Unsafe speed emerges as a significant category of driver error, particularly in fatal collisions, and following similar recent Ontario actions, fines for speeding might appropriately be doubled, with attendant publicity campaigns developed to underscore both the safety and financial consequences of excessive speed. In enforcing speeding laws, it is important that police activities focus on drivers whose speed involves high degrees of variance from mean traffic speeds on given highways rather than succumbing to easy ticketing of drivers through radar control whose speed is close to the mean speed of the prevailing stream of traffic.

5. These measures, if adopted collectively, may seem like tough medicine for dealing with traffic safety problems. But the unpalatable fact must be faced that the costs of automobile insurance under any system -tort/third party liability

insurance or some form of first-party no-fault regime - cannot be significantly reduced or even contained unless the underlying trends in frequency and severity of traffic accidents are sharply ameliorated.

CHAPTER 4

TORT REFORM: REDUCING DAMAGE AWARDS

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I INTRODUCTION

In contrast to public law regulatory reform which for the most part has as its goal a reduction in the frequency of automobile accidents, private law tort reform aims at reducing the size of the awards for damages that are ultimately borne by the tort law liability system. Typical tort reforms, which have been much discussed in other tort contexts such as medical malpractice[1], include reducing victims' recovery in tort for non-pecuniary losses like pain and suffering, abolishing the traditional collateral benefits rule, mandating structured judgments, reducing pre-judgment interest, and eliminating (or at least reducing) third party survivors' claims in the case of fatal accidents. In the discussion to follow, we shall examine these reforms in this order, an order that roughly reflects their decreasing potential for savings in the overall funding of bodily injury claims in tort law.

II REDUCING RECOVERY FOR NON-PECUNIARY LOSS

(a) Eliminating Damages for Pain and Suffering

In chapter two we noted that there were two key principles that animated tort law in general, namely that accident victims could only recover if they could prove that their injuries or losses were caused, in whole or in part, by the fault of another, and that, given proof of fault, accident victims could seek full

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[1] See P. Danzon, Medical Malpractice (1985) for some good discussion and empirical assessment of these reforms in the context of medical malpractice.

redress for all of the damages they suffered, including both pecuniary and non-pecuniary losses. While the fault principle clearly limits the possible liability payments that might otherwise have to be made in tort law (e.g. as compared to a system of strict or absolute liability), the principle of full redress for both pecuniary and non-pecuniary loss expands liability payments beyond what some tort reformers think is appropriate. Indeed, something of the general sense that recovery for non-pecuniary losses should be more limited than for pecuniary losses probably motivated the Supreme Court of Canada to put a cap of $100,000 on recovery for pain and suffering in 1978.[2] More vigorous reformers of tort law would have us limit recovery for such losses even further, or at least limit such recovery in a way quite different from a cap.

That there is some scope for substantial savings in the cost of bodily injury claims for automobile accidents if non-pecuniary damages are limited in some way is evidenced by the fact that in Ontario in 1986 almost half (45.6%) of the aggregate amount of all such claims leading to some judgment or settlement was accounted for by non-pecuniary damages.[3] In Alberta the experience has been made the same; in 1990, for example, non-

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2 Andrews v. Grand and Toy Alberta Ltd., [1978] 2 S.C.R. 229

3 Report of Inquiry into Motor Vehicle Accident Compensation in Ontario hereafter (The Osborne Commission Report), Vol 1 (1988), at ch. 7

pecuniary damages made up 47.7% of all bodily injury claims.[4] Figures for pain and suffering damages as a proportion of overall damage awards appear to be even higher in the U.S.,[5] but this probably reflects the fact that there is a less systematic use of a cap on such awards in the U.S. In any event, absent some second order effects (eg. on the frequency of accidents), it seems reasonable to think that insurance premia could be reduced by just over one quarter if tort recovery for non-pecuniary losses were eliminated entirely. (This figure is lower than the percentage that non-pecuniary loss is of aggregate bodily injury claims because bodily injury claims are only 58.5% of overall loss costs[6]).

Is there any kind of justification for such a reform beyond the fact that it might reduce liability insurance premia? It must be remembered that non-pecuniary losses are no less real as losses for their being non-pecuniary in nature. Thus, even if such losses are not paid for in liability judgments and, therefore, not insured for in liability insurance, the losses are still being borne by someone, namely the uncompensated victim.

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4 J. Cheng (Eckler Partners Ltd.) Alberta Bodily Injury Survey (1991) A, (Summary table appears as Appendix A to this chapter)

5 See W.K. Viscusi, "Pain and Suffering in Product Liability Cases: Systematic Compensation or Capricious Awards?" (1988) 8 Int. Rev. L. and Eco. 203

6 The figure is for 1986 in Ontario; See The Osborne Commission Report, Vol. II, supra n. 3, at 593. Loss costs per vehicle, and the exact relationship that these bear to premia, are discussed in some detail in ibid.,, Vol. I, at ch.7, especially at 245, 275 and 278.

Looked at in this light, the insurance premia savings seem a great deal less attractive; they simply represent a transfer from those unfortunate enough to be the victim of an automobile accident to those fortunate insureds who happen never to be involved in one. Do the other criteria we have identified as appropriate for the assessment of tort law and its alternatives, i.e. those criteria other than premia savings like deterrence and victim compensation, provide any different kind of judgment on the matter?

The goal of effective deterrence hardly seems to be served by eliminating a faulty tortfeasor's liability for a particular kind of loss. Again, the point must be that these losses are genuine losses, and we do not want to avoid them any the less simply because they are non-pecuniary in nature.[7] Thus, the deterrence goal argues much more for a victim's full recovery for non-pecuniary losses than it does for any kind of elimination of such recovery, and it would even find fault with the system of partial recovery under a cap that is currently operating in Alberta and elsewhere in Canada.

What about the victim compensation perspective? Again, since these losses are genuine, full redress for the injury seems to require full compensation even if the injury is non-pecuniary in nature. Thus, the victim compensation perspective also seems to demand that we make no distinction between pecuniary and non-

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[7] M. Trebilcock, "The Social Insurance-Deterrence Dilemma of Modern North American Tort Law: A Canadian Perspective on the Liability Insurance Crisis" (1987) 24 San Diego L.R. 929

pecuniary losses, not even the one mandated by the Supreme Court in 1978. However, the matter is more complicated if we appreciate that both the victims who recover for non-pecuniary losses, and the defendant drivers who are held liable for such losses, form a common insurance pool. In such a situation the potential victim of an automobile accident can look forward to paying an actuarially fair price for the right to recover for non-pecuniary losses in the premium she pays for automobile liability insurance. Thus, full compensation ex post for non-pecuniary losses as well as pecuniary ones is something one pays for, or insures for, ex ante. This insurance perspective casts the purely compensatory idea of full recovery for non-pecuniary loss in a slightly different light.[8] The hard fact of the matter is that individuals typically do not choose to insure, at least in first party insurance schemes, for the recovery of non-pecuniary losses.[9] The emotional distress one feels in the loss of a child or a spouse, for example, is not something for which the payment of money under an insurance scheme makes any real difference. Put differently, this kind of loss, unlike a paradigmatic pecuniary loss involving, say, medical expenses or the loss of earnings,

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8 For good discussion of the insurance perspective on non-pecuniary loss, see R. Cooter, "Towards a Market in Unmatured Tort Claims", (1989) 75 Virginia L.R. 383. Also, see P. Cook and D. Graham "The Demand for Insurance and Protection: The case of Irreplaceable Commodities", (1977) 91 Q.J. Econ 143; and S. Rea, "Non-pecuniary Loss and Breach of Contract", 1982 11 J. of Leg. Stud. 35

9 A systematic review of the evidence on this is to be found in P. Danzon, "Tort Reform and the Role of Government in Private Insurance Markets", (1984) 13 J. of Leg. Stud. 517

does not, just in virtue of its happening, increase our demand or need for money in any way.[10] Thus, it is not the sort of loss for which we will typically be willing to give up money in an ex ante world where we have not yet had an accident (i.e. the world in which insurance premia are paid) in exchange for the right to receive money in a world where the accident actually occurs ex post. Thus, from an insurance perspective, full compensation for non-pecuniary losses is excessive in that it provides more compensation to victims than what they are willing to pay for. This may justify, therefore, some sort of tort reform that eliminates, or at least reduces,[11] a victim's right to recovery for non-pecuniary losses in automobile accidents.

It must be recognized, however, that any attempt to justify a reduced recovery for non-pecuniary losses on the insurance or victim compensation perspective runs headlong into what the deterrence goal requires. Optimal deterrence requires that the defendant at fault pay the full cost of her activity; anything less, such as paying victim plaintiffs for negligently caused pecuniary losses only, will mean less than adequate deterrence. Nor is it an obvious answer to this insurance-deterrence

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10 More accurately the economist would say the loss does not increase our marginal utility for money. See Cooter, supra n.8

11 For an argument that only a reduction rather than a complete elimination of recovery for non-pecuniary losses can be justified on "insurance" grounds, see B. Chapman and M. Trebilcock, "Punitive Damages: Divergence in Search of a Rationale" (1989) 40 Alabama L.R. 741, at 772-74.

dilemma[12] to have the defendant pay some equivalent regulatory fine to the state rather than tort damages for non-pecuniary losses to the victim.[13] If these fines are insurable, then the costs of their insurability are still being passed on to tort victims who operate in the same insurance pool, only now the tort victim would not recover ex post for non-pecuniary losses despite having paid towards their costs ex ante. On the other hand, if these regulatory fines were an uninsurable form of liability, then tort victims would not be paying to fund their possible recovery for non-pecuniary losses, but at the same time a defendant motorist, if judgment proof and uninsured for non-pecuniary losses, may not face the real prospect of having to pay the full costs of her activity. In other words, the insurance-deterrence dilemma would raise its head again.

(b) Structuring a Scheme of Limited Recovery for Pain and Suffering

Even if one accepted the argument, either on victim compensation or optimal insurance grounds, or out of a concern for the savings in insurance premia that would be involved, that one should at least limit recovery in tort for non-pecuniary losses like pain and suffering, there still remains the issue as

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12 Trebilcock, supra n. 7

13 The American Law Institute makes a suggestion like this in its report on Enterprise Responsibility for Personal Injury (1991), Vol II, at 213 (hereafter the ALI Report), although the ALI is not unaware of the difficulties involved with such a scheme.

to how properly to structure such a limitation scheme. At present, non-pecuniary losses seem to form a significantly greater percentage of the aggregate amount of small claims than they do of the aggregate amount of large claims. In Ontario, for example, in 1986 non-pecuniary losses comprised 70.5% of the aggregate of all bodily injury claims between $1,000 and $10,000; for claims between $10,000 and $75,000 and for claims over $75,000 the analogous figures were 47.2% and 27.0% respectively.[14] In Alberta in 1990 the percentage figures for the same three categories of claims were 83.1%. 57.1% and 18.2%, reflecting an even larger skew of non-pecuniary losses towards the smallest category of claims. [15]This last figure may only reflect the workings of the Supreme Court of Canada's 1978 cap on recovery for pain and suffering damages, but it raises the question whether the burden of tort cost containment within such a system of caps is not, somewhat inequitably, being borne more by those tort victims who are most severely disabled over a longer period of time, in particular the youngest who can expect to live longest with the disability, and is leaving the less seriously injured whose non-pecuniary loss lies entirely below the cap largely unaffected.

An alternative to the cap system, is the floor or 'deductible' system, i.e. a system that would not allow recovery

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14 The Osborne Commission Report, Vol 1. supra n. 3, at 258-262

15 Alberta Bodily Injury Survey, supra n. 4; and Appendix A of this chapter.

in tort for any claims for pain and suffering falling below some threshold amount (eg. $10,000).[16] This seems to be more a vertically equitable result than the cap system, and it would tend to remove from the tort system the bulk of the less significant pain and suffering claims (eg. claims for whiplash) which are presumably expensive to litigate considering the real stakes that are involved. The latter source of savings could either be captured as reduced insurance premia for everyone or, if a floor was combined with a cap, passed on as a benefit to the more seriously injured in that a more generous cap on recovery for non-pecuniary losses could then be allowed.

However, between a relatively high cap on awards for non-pecuniary losses and a floor below which no such awards would be available at all, there is still room for further tort reform and consequent savings in insurance premia. Moreover, there is good reason for thinking that such reform is required for ethical reasons. This is because in a cap system there is still some vertical inequity involved in the treatment of those victims whose recovery in tort is limited by the cap as compared to those victims whose claim lies between the floor and the cap and who are, therefore, quite unaffected by either. Some critics of the standard form cap system suggest that it should be replaced by a scale, (or even a schedule of standardized payments) according to which the amounts awarded under the cap for lesser injuries would

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16 This is recommended by the ALI Report, supra n. 13, Vol. II, ch. 8.

be prorated downwards from the maximum amount that was available for the most serious cases of non-pecuniary loss until eventually the scale (or schedule) terminated at the floor level for such damages.[17] In that way there would be more vertical equity operating between victims with varying levels of disability over the scale between the floor and the cap. And, again, it would be possible, given the savings involved with such a scale, to provide for a more generous cap for the most serious cases of non-pecuniary loss.

There is an advantage to achieving reduced liability insurance premia within the tort system by reducing the recovery for non-pecuniary loss that is worth emphasizing here. If one were to provide for an equal reduction in insurance premia by mandating some reduced victim recovery for pecuniary losses in tort law, then it is likely that potential victims of accidents would react by buying increased amounts of first party insurance to compensate for those possible losses in alternative ways (eg. through employer's disability plan). Thus, the savings in third party liability insurance would be largely offset by increased expenditures on first party insurance. But since individuals do not (as argued above) choose to insure for non-pecuniary losses, there would be no such offsetting reaction in the face of reductions in any allowed recovery for non-pecuniary loss. Thus, such reductions are much more likely to result in real savings in insurance premia, first and third party alike.

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[17] This is another recommendation in Ibid

III CHANGING THE COLLATERAL BENEFITS RULE

Collateral benefits are those benefits which are additionally available to a tort victim in virtue of the injury the victim has suffered. They include privately contracted for insurance benefits and employer provided disability plans, as well as such publicly provided income replacement schemes as unemployment insurance, social welfare benefits, and total disability pensions under the Canada Pension Plan. The traditional rule in tort law is that the availability of such benefits to a tort victim should not be taken account of in assessing damages for loss of earnings or earning capacity in personal injury cases.[18] It has been estimated that savings of around two percent of the total accident loss cost per private vehicle would result if this traditional rule were abolished and a collateral source offset rule introduced instead,[19] it is not surprising that after the elimination or reduction of recovery for non-pecuniary losses this is the next most frequently urged reform in tort law. The Osborne Commission recommended the legislative abolishment of the traditional rule in Ontario,[20] and nearly half of the U.S. state legislatures have introduced

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18 Boarelli v. Flannigan [1973] 3 O.R. 69 (Ont. C.A.). But for some indication that the Supreme Court of Canada might be retreating from the traditional rule, see Ratych v. Bloomer (1990), 73 O.R. (2d) 385, although the scope of this recent retreat still remains to be determined.

19 See The Osborne Commission Report, Vol 2, at 617. The two percent figure is the proportion that a $6.62 reduction is of the total $339.62 annual estimate of such loss costs.

20 Ibid., Vol 1 at 438

some sort of modification to it.[21]

The usual argument against the traditional collateral benefits rule is that an injured person should not be permitted to recover more than once for the same loss. Certainly there does seem to be evidence that the traditional rule results in such overcompensation. The Osborne Commission, for example, estimated that, in aggregate, Ontario motor vehicle accident victims were being overcompensated by about seventeen percent in 1987, a figure the Commission suggested was likely to underestimate the extent of the overcompensation problem.[22]

However, it is unclear from an insurance perspective why a potential tort victim would pay for the possibility of over compensation. Presumably, the rational insurance decision is to insure only for those losses which cannot otherwise be recovered in tort. This would reduce the costs of first party insurance to the insured tort victim as compared to what they would be under double recovery. However, such a scheme would effectively make tort law the first resort for injury compensation, something which, because of the expenses and uncertainties of tort litigation, may not be attractive to the insured. Even so, this only suggests that the insured would rationally choose to recover first from the collateral source and allow that source the right of subrogation against the tortfeasor for any possible tort damages. That too allows the motor vehicle accident victim to

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21 ALI Report, supra n 13, Vol. II, at 167

22 The Osborne Commission Report, Vol 1, at 433

have cheaper first party insurance and avoids the problem of a victim receiving excessive compensation. Moreover, this combination of the traditional collateral benefits rule with a right of subrogation available to the collateral source (at least, if it is private) is, in principle at least, what is currently operating in common law jurisdictions like Alberta.

The puzzle, therefore, is why there is the excessive compensation of accident victims to which the Osborne Commission refers, an excess that suggests that the rights of subrogation are not being exercised in practice and that tort victims are receiving more compensation than they really want to pay for. On the one hand, the lack of subrogation may be due to numerous practical difficulties, such as determining what portion of a total settlement or award is properly payable to the collateral source.[23] That such determinations are expensive is evidenced by the fact that in Ontario, until the recent no fault reforms, the Ontario Health Insurance plan collected an annual (average) fee from the auto insurance industry rather than litigate its right of subrogation on an individual case by case basis.[24] On the other hand, it may also be that the allegations of overcompensation in the traditional rule are off the mark once one accounts for the fact that a tort victim's legal costs of

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23 For some discussion of these problems, see the ALI Report Vol 2, at 178

24 Under the new no fault plan in Ontario, this fee is no longer collected by the Ontario Health Insurance Plan, something which explains at least some of the claimed for savings under no fault.

pursuing a claim often go uncompensated. However, on the latter point, it seems better to compensate for these additional costs directly and explicitly than to do so indirectly and somewhat arbitrarily by way of the traditional collateral benefits rule.

From a deterrence perspective, abolition of the traditional collateral benefits rule in favour of a collateral source offset rule is problematic. Under an offset rule, the effect of the tort victim having paid for a benefit from a collateral source is that the defendant tortfeasor's liability is reduced. As a first order effect, one should predict a consequent loss of deterrence incentives for the defendant and a consequent increased frequency of motor vehicle accidents. And as a second order effect, since the tort victim is effectively subsidizing the defendant by way of her first party insurance purchases, we should predict some reduction in the amount of such first party insurance that is ultimately purchased. Thus, it is unclear that in the long run there is much to be gained by abolishing the traditional rule, at least if a reduction in the aggregate costs of tort claims is the objective. At a minimum we should expect these gains to be significantly smaller in the long run than the fourteen percent of the cost of all bodily injury claims projected by the Osborne Commission, a projection that did not take into account this second order effect on the purchase of first party insurance.[25]

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25 See supra n. 19

IV MANDATORY STRUCTURED JUDGMENTS

At common law, tort damages are typically awarded in a lump sum fashion. That is, the successful plaintiff is awarded a once-and-for-all sum which, when it is invested, will produce an income sufficient to meet, for example, the costs of future care or the lost future earnings for which it has been decided the plaintiff ought to be compensated. In addition to this, some jurisdictions permit the use of periodic rather than lump sum awards to the plaintiff so long as both parties to the litigation agree.[26] However, it has generally been accepted, and has now been recently reconfirmed by the Supreme Court of Canada,[27] that the plaintiff is entitled to receive his or her award in lump sum form, and that a court cannot mandate a series of periodic damage payments instead. This has prompted some tort reformers to suggest that legislation be passed to give the courts the power to mandate periodic or structured tort judgments.

The advantages of a scheme of mandatory judgments are said largely to be in the tax savings involved. Under existing tax law, which provides that damages for personal injuries are not taxable income, periodic payments of the damages are tax free.[28] By contrast, while payment of a lump sum of damages might be tax free, the income earned from that lump sum, once it

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26 See, eg. Courts of Justice Act, 1984, S.O. 1084, c.11, s.129

27 Watkins v. Olafson (1989), 61 D.L.R. (4th) 577 (S.C.C.)

28 Ibid, at 586

is invested, is not. This suggests (and the suggestion has now been accepted by the Supreme Court of Canada[29]) that a lump sum damage award ought to be "grossed up" for tax, that is, that an additional sum be awarded to the plaintiff so that after tax the plaintiff is in a position to purchase the requisite future care that full compensation for her injury demands. The size of this gross up can be substantial, and at least one investigator of the phenomenon has estimated that, when awarded, it averages about thirty five percent of the total future care awards that are made.[30] Since a periodic payments scheme avoids any such tax implications, the argument is that awards could be lower and liability insurance premia saved if such schemes were made mandatory.

One might ask, if the parties to litigation can save tax dollars this way, why do they not themselves voluntarily agree to a scheme of periodic payments? Why, in other words, does such a scheme have to be made mandatory if the requisite savings in tort liability are to be achieved? The answer lies in appreciating that if the plaintiff has a right to insist on the lump sum award with its gross up for taxation, then the plaintiff is in a position to bargain for a higher periodic damage award than what is required for her full compensation in any voluntary structured settlement. Thus, without the scheme being mandatorily imposed,

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29 Ibid, at 589

30 See B. Feldhusen, "Mandatory Structured Judgments", (1988) 1 Canadian Insurance Law Review 1

one would expect any periodic payments to which the parties voluntarily agreed still to reflect to some extent the background tax implications of a lump sum award. Only a mandatory scheme of structured judgments would effectively remove the plaintiff's ability to threaten the defendant with her insistence on a large lump sum award with its gross up for tax and thus undermine her ability, within a voluntary structured settlement, to negotiate for, in addition to what is required for her full tort compensation, a large share of the tax savings that are involved. Thus, a scheme of voluntary structured settlement will not realize in full the tax savings that could be achieved for the parties (and for the defendant in particular) in a scheme of mandatory structured judgments.

It might be argued that eliminating the effects of the gross up for taxation by way of a tort reform mandating structured judgments is not a way to effect any <u>real</u> cost savings. Rather it might be suggested that the savings that are involved only reflect a transfer, or redistribution, from the taxing authorities (and, therefore, other taxpayers) to the defendant who now need pay no gross up for tax. However,this argument confronts at least the two following replies. First, the gross up for tax is most common in the case of lump sum awards for future care costs. In the case of lost future income, the general practice is to estimate the plaintiff's future pre-tax income and discount that to the present; in such a situation there is

obviously no need additionally to gross the award up for tax.[31] However, in the case of a future care award, the taxing authority had no expectation before the tort occurred of receiving any tax monies from the plaintiff when the plaintiff was able to take care of herself. Why then should the taxing authority, after the tort, have any claim to tax the income received from a lump sum award for the costs of future care? Better is the award that, because of its structured form, avoids any such tax implications; taxpayers are no worse off, and the defendant's liability without the gross up is significantly reduced.[32] Second, the fact remains that if voluntary structured settlements are available to the parties, then taxpayers will not likely realize any tax revenues in any case. Rather, as suggested above, the plaintiff will negotiate within a structured settlement for some share of the defendant's savings in not having to pay a large lump sum grossed up for tax. Thus, whether the structured settlement is mutually agreed upon by defendants and plaintiffs, or whether it is mandated as a structured judgment by the courts, the redistribution from taxpayers to defendants and plaintiffs will occur anyway. The only difference is that a court mandated structured judgment has the advantage of avoiding the overcompensation of the plaintiff that is involved in the plaintiff's negotiated share of the tax savings enjoyed in a

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31 Ibid, at 17

32 The alternative, i.e. of avoiding income tax as damage payments of any kind, including lump sum awards, lies with the Federal government.

system of voluntary structured settlements. While this might suggest that the plaintiff is worse off under a mandatory scheme, the fact remains that in the motor vehicle accident context, plaintiffs and defendants are in the same liability insurance pool, and any excessive compensation ex post is compensation that a plaintiff will likely not want to insure for ex ante.

V PREJUDGMENT INTEREST

Considerable time can elapse between an accident and the final disposition of a case. If the defendant is finally found to be liable for the accident this means that over this time the defendant has had the use of money which rightfully belonged to the plaintiff as damages. At common law, the defendant was not required to pay the plaintiff any interest on this money. This created an incentive for the defendant to delay the trial of an action as long as possible and, in the end, resulted in the systematic undercompensation of plaintiffs. In most jurisdictions, legislation requiring the payment of prejudgment interest has now been passed to remedy those problems. In Alberta, the relevant statute is the Judgment Interest Act.[33]

While it is now widely recognized that some sort of prejudgment interest should be paid to the plaintiff, there is still some controversy about the appropriate rate of interest that should apply and the date from which the interest should run. In Alberta, prejudgment interest runs from the date the

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[33] Judgment Interest Act, S.A. 1984, c.J-0-5

cause of action arose which is the proper approach on either a deterrence or victim compensation perspective. However, some jurisdictions like Ontario, for example, only pay prejudgment interest on some damage claims (eg. unliquidated damages) from the date of the notice of claim.[34] This is designed to induce timely claims and to reduce the uncertainty defendants face in litigation. Related proposals that the plaintiff only be permitted to accumulate interest after she has provided the defendant with the requisite medical information are also designed to use prejudgment interest as an inducement to speed up proceedings.

In Alberta the prescribed rate for prejudgment interest is left to vary with the regulations on an annual basis.[35] In Ontario, by contrast, the Act prescribes that the rate is to equal the Bank rate (in the previous quarter) rounded up to the next highest percentage point, plus one percentage point. The resulting rate is roughly that charged to prime corporate borrowers and is, therefore, below the borrowing rate faced by individuals and above the rate that individuals can earn. Thus, the Ontario formula probably represents a necessary but reasonable compromise between on the one hand, a disadvantaged defendant who uses the money over the prejudgment interval at an investment rate below the prejudgment interest rate and, on the other hand, a disadvantaged plaintiff who might, over the same

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34 Courts of Justice Act, S.O. 1984, c.11 s. 138 (i)(b)

35 Supra n.33, at s.4(3)

interval, have to borrow money at a rate above the prejudgment interest rate. However, the fact that in both Alberta and Ontario compound interest (or interest on the prejudgment interest) is not awarded is a systematic advantage for the defendant.[36]of It is better that prejudgment interest be compounded when general damages are determined. Not doing so is problematic from the perspective of both deterrence and victim compensation, and probably induces unnecessary delay by the defendant in legal proceedings.

A special problem arises in the case of awarding prejudgment interest on non-pecuniary damages. Since Lindal v. Lindal,[37] the Supreme Court of Canada has recognized that the 1978 cap of $100,000 on damages for pain and suffering needs to be indexed for inflation. In current dollars, therefore, the cap is now about $200,000. Should prejudgment interest be payable on these new indexed amounts at the same rate as for past pecuniary losses? The answer is no. The nominal rates of interest (eg. the Bank rate) discussed above include a component that already accounts for inflation. Thus, to award non-pecuniary damage at an inflated rate as in Lindal and, further, to award prejudgment interest at a nominal rate on such damages is to overcompensate the plaintiff for inflation and give her an incentive to delay final settlement of the case as long as possible. Alberta is the

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36 See supra n.33, at s.2(2)(b) (Alberta), and supra n.34, at s.138(3)(b) (Ontario)

37 (1981), 129 D.L.R. (3d) 363

only province that seems to have recognized this problem in that it awards prejudgment interest on non-pecuniary losses at four per cent, presumably an estimate of a real rather than nominal rate of return.[38] While this approach is correct in principle, it is probably overly rigid to embed a four percent rule in the statute. The real rate of return is relatively stable over long periods of time, but it might vary significantly within the shorter prejudgment intervals. It might be better to allow for this variability by letting this prejudgment interest rate to be determined in the regulations. Second, it seems that four percent is a high estimate of the real rate of return. Historically, this rate is closer to three percent and the historical figure should be what the prejudgment interest rate on inflation-indexed non-pecuniary damages should approximate on average over the long run.

VI SURVIVORS' ACTIONS IN FATAL ACCIDENTS

At common law, surviving family members had no cause of action for the death of someone in the family. This apparent unfairness has been remedied in large part by legislation, and in Alberta in particular by the Fatal Accidents Act.[39] This Act allows a spouse, parent, child or sibling of the fatally injured person to bring an action for "those damages that the court

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38 Supra n.33, at s.4(1)

39 Fatal Accidents Act, R.S.A. 1980, c.F-5

considers appropriate to the injury resulting from the death".[40] Typically, these latter damages are for financial losses (eg. loss of support that the claimant might have expected from the after-tax income of the deceased), but the Act also prescribes a set of conventional $3000 awards for "bereavement" for a slightly more limited class of claimants (i.e. spouse, parents, or children of the deceased).[41]

Would-be tort reformers argue that these fatal accident awards are costly, and that some limitations on recovery are justified as a way to save on motor vehicle accident insurance premia. However, it is difficult to give much credence to the claim. In the 1986 claims survey done for the Osborne Commission it was revealed that claims under the analogous legislation in Ontario accounted for only 5.4% of all bodily injury liability claims paid and not all of these were for fatal accidents.[42] Moreover, in approximately three quarters of these claims, the payments made were shared by no more than two relatives, something which suggests that the claims now made do not generally extend beyond immediate family members.[43] Furthermore, it should be noted that Alberta's list of possible claimants is already more restricted than Ontario's, and that its use of conventional awards for bereavement meets, to some extent,

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40 Ibid, at s.8

41 Ibid, at s.8

42 Supra n.3, Vol 1, at 389

43 Ibid, at 390

the reform idea that in cases of non-pecuniary losses it is better to prescribe a given amount than to have the proper figure as something that has to be litigated in each case. This is the same kind of thinking that pushes some tort reformers towards a schedule format for non-pecuniary damages in general.

There is one procedural reform that might be helpful in Alberta. Under the current Act there is a prohibition against bringing more than one action in respect of the same subject matter of complaint. In this respect the Alberta legislation compares with the old Family Law Reform Act[44] which used to govern these fatal accident claims in Ontario. However, the feeling in Ontario was (and this was picked up by the Osborne Commission[45]) that this feature obliged plaintiffs to join other possible relatives to their claim, something that had the practical effect of encouraging claims of a relatively minor nature. Under Ontario's new Family Law Act, any relative can and must bring his or her own action. The likely effect of this is that trivial claims are not made and the high costs associated with these claims are reduced.

VII SUMMARY

The following table summarizes the effects of the various tort reforms on loss cost per private vehicle as estimated by the Osborne Commission based on its own Ontario claims survey. In the

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44 Family Law Reform Act, S.O. 1978, c.2, s.60(4)

45 Supra n.3, Vol 1, at 391

case of eliminating recovery for non-pecuniary loss, the effect of the reform has been calculated by multiplying the proportion of aggregate bodily injury claims that is accounted for (in 1986) by non-pecuniary losses by the proportion that such bodily injury claims are of overall loss costs.[46] The effect of changing the traditional collateral benefits rule to an offset rule is directly calculable from Osborne's own estimate.[47] The imposition of mandatory structured judgments on future care costs, which has the effect of eliminating a necessary gross up for tax, is also calculated by multiplying the proportion of future care costs which is made up of bodily injury claims by the proportion that these latter claims form of the total loss costs, and then multiplying that product by thirty five percent, the latter being the estimate that the gross up forms of total future care costs.[48] In the case of tort reforms relating to prejudgment interest and fatal accident claims, the effect on loss costs per private vehicle in Alberta are difficult to assess on the basis of the data from the Osborne Commission claims survey. This is because Alberta has already, to some extent, incorporated the reforms that the Osborne Commission discussed. For example, Alberta already uses a real rather than nominal prejudgment rate of interest for non-pecuniary losses, and the

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46 Bodily injury claims form 58.5% of overall loss costs. See The Osborne commission Report, Vol II supra n. 3, at 593.

47 Ibid, at 617

48 See supra, text at n. ?.

list of claimants who can recover for fatal accidents is already more limited than in Ontario. Thus, any measure of savings or loss cost per vehicle in Ontario under these sorts of reforms are likely to overestimate what is possible in Alberta. Subject to that caveat, however, and subject to the much more general warning that all such figures are only useful as very rough estimates of the relative magnitudes involved rather than as precise predictions of the effects of any given reform, the estimated impact on loss cost per private vehicle is as follows:

Estimate of the Effect of Tort Reforms
on Loss Costs per Private Vehicle

Tort Reform		Proportional Effect on Overall Loss Cost
1.	No Recovery for Non-Pecuniary Loss	-26.7%
2.	Abolition of Collateral Benefits Rule	- 2.0%
3.	Imposition of Mandatory Structured Judgements for Future Care (i.e. elimination of tax gross up)	- .3%
4.	Reduced Prejudgment Interest (eg. to real rate on non-pecuniary loss	- 2.7% in Ontario; but significantly less in Alberta
5.	Reduced Fatal Accident Claims	not available, but likely to be small

These figures indicate that the only real source of savings in tort reform is to be found in the elimination of any recovery for non-pecuniary loss. However, this is by far the most controversial reform of the five on both deterrence and victim compensation grounds. The use of a floor along with the continued

use of a (possibly more generous) cap on non-pecuniary losses might still allow for some of these premia savings, since a significantly larger proportion of the smaller claims is made up of claims for non-pecuniary losses. Moreover, it might be less controversial than the complete elimination of such recovery. However precise estimates of the effect of this more partial tort reform cannot be made on the basis of the data produced in the Osborne Commission Report.

APPENDIX A

ALBERTA BODILY INJURY SURVEY
BREAKDOWN OF JUDGEMENT/SETTLEMENT
CLOSED IN 1990

	All Claims %	Claims Under $10,000 %	Claims Between $10,000 & $75,000 %	Claims Over $75,000 %
Loss of Employment Income	14.6	7.6	21.4	11
Out of Pocket	5.8	3.7	6.3	6.4
Non-Pecuniary*	47.7	83.1	57.1	18.2
Future Employment Income	18.6	0.2	3.4	45.1
Future Care	3.3	0.2	0.7	7.8
Gross-up for Tax	0.8	0	0	2
Fund Management	0.2	0	0	0.6
Party and Party Costs*	5.2	4	6.5	4.5
Prejudgment Interest	3.9	1.2	4.7	4.5
Total	100.1	100.0	100.1	100.1
Number of Claims	577	443	124	10
Amount of Claims	$6,942,301	$1,459,138	$2,835,645	$2,647,518

*Note: Party and Party Costs for Claimants Represented by Counsel Have Been Adjusted if Entered as Zero

Source: J. Cheng (Echler Partners Ltd), Alberta Bodily Injury Survey (unpublished 1991).

CHAPTER 5

ENHANCED ADD-ON NO-FAULT

Contents

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I DESCRIPTION OF THE MODEL

The Osborne Commission's Proposal[1] will serve as our exemplary model for an enhanced add-on no-fault regime. In this model, the tort system remains in place and open to suits in the automobile accident context, although it is reformed in various ways. Possible reforms of tort law were discussed above in chapter 4, but it is important to note one particular reform in this model: the abolition of the collateral source rule[2]. This reform means that collateral benefits in the nature of indemnity payments[3], such as unemployment insurance benefits and employment disability benefits, are deducted from the relevant components of a tort award (and we assume from the relevant component of no-fault benefits payment[4]) made to the injured person[5] . In other words, tort and no-fault compensation are both secondary to compensation through collateral benefits. As well, any no-fault benefits are deducted from the tort damage

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1 The Honourable Mr.Justice Coulter A. Osborne, Report of Inquiry into Motor Vehicle Accident Compensation in Ontario, vol. 1 (Toronto: Ontario Ministry of the Attorney General and the Ministry of Financial Institutions,1988).

2 The rule from Boarelli v. Flannigan, [1973] 3 O.R. 69 that collateral benefits should not be taken into account in assessing damages for loss of earnings or earnings capacity in personal injury cases.

3 That is, payments which are intended to compensate for a pecuniary loss, not payments of a predetermined amount upon the occurrence of some specified event regardless of pecuniary loss.

4 Osborne mentions this only in the case of no-fault employment benefits.

5 Osborne,vol I,441.

award.

The minimum coverage for third party liability (bodily injury and property damage) would remain set at $200,000.[6]

The following no-fault benefits[7] would be provided through mandatory, appropriately risk-rated[8] first-party insurance to all individuals injured in automobile accidents, without exception. The left hand column indicating the Schedule B no-fault benefits under the former Ontario regime,which was closely comparable to the current Alberta regime, is for purposes of comparison.

Table 5.1

FORMER ONTARIO NO-FAULT (Schedule B) Benefits	**OSBORNE PROPOSAL NO-FAULT BENEFITS**
Rehabilitation $25,000 per claim	$500,000 per claim maximum Time limit: 10 years or 20 years less victim age, [9] whichever is longer.
Long-Term Care No Benefits	$500,000 per claim maximum. Family members may be compensated for care of the injured person. Benefits not to exceed the monthly cost of group residence which might reasonably accommodate victim's needs.

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6 Osborne, vol. I 583.

7 Osborne, p.583-4.

8 An exception is the case of motorcycle premiums. See below.

Disability Income Benefits	
1) Employed 80% of gross wages, to a maximum of $140 per week. Benefits for a maximum of 104 weeks unless totally disabled No waiting period	80% of gross income, to maximum of $450 per week Secondary to collateral benefits, except U.I.C.[10] benefits. Age: 16 or over 7-day waiting period
2) Deemed to be Employed To qualify, claimant must have worked 6 out of last 12 months. As above	Claimant must have worked 6 out of the last 12 months 80% of gross income, to maximum of $450 per week. Age: between 18 and 65 60-day waiting period
3) Students No benefits.	Elementary school: $1,000 for loss of school year; $340 per week at age 19 if still disabled and not attending school. Secondary school: $2,000 for loss of school year; $340 per week at age 19 if still disabled and not attending school. College/University: $4,000 for loss of school year; $340 per week when no longer entitled to loss of school year benefits.
Homemaker Disability Benefit $70 per week for a maximum of 12 weeks	Child Care In case of injury to provider of child care: $200 per week plus $50 per week per dependent child to maximum $350 per week. No waiting period. Payable for 2 weeks without proof of expenses incurred; then payable with proof of reasonable expenses incurred.
Household Care house-keeping, meal preparation, grass cutting etc. N/A	$50 per week payable on basis of reasonable expenses incurred

Death Benefit For death of head of household or spouse: $10,000 plus $1,00 for each dependant child beyond first. For death of dependent child $2,000	For death of head of household or spous head of household: $25,000 plus $10,000 for each dependent. For death of a dependant child $10,0
Funeral Expenses $1,000	$3,000
	All benefits, except the death benef indexed once a year to annual consumer pr index, subject to a maximum of twice stipulated original benefit amount.

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II EVALUATION OF THE MODEL

(a) Deterrence/Prevention

The importance of the changes in accident deterrence resulting from the introduction of an enhanced add-on no-fault scheme depends upon the magnitude of the accident deterrence inherent in the tort law regime itself. This has been discussed above in chapter 2. What will be attempted here is an analysis not of the absolute size of the deterrence effects of the implementation of the Osborne model, but of the direction of these effects relative to the degree of the deterrence produced by the tort law system as a whole.

One would expect a number of deterrence effects to operate simultaneously under this model. One is a consequence of the fact that the third party insurer of the negligent driver will

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*9. The latter time period allows children under the age of 10 the extra time which they sometimes need to be rehabilitated.

10. Unemployment Insurance of Canada.

not be forced to cover the full cost of the other driver's loss, as it would in a traditional tort law regime. This is because in the case of a successful lawsuit, no-fault benefits are subtracted from the damage award, and in the case of no lawsuit (because the other driver is already fully compensated for her loss, or because the expected value of a lawsuit is small given the possibility of losing and being burdened not only with one's own legal costs but also the defendant's party -and-party costs) the negligent driver's third party insurance pays nothing. Because the cost to the insurer is less than that in a tort law regime, third party premiums for drivers with a record of negligence will not be as high. Consequently, the risk of increased premiums will not be as great a deterrent of risky driving,nor will high premiums have as great an activity level effect on those with a high price elasticity of demand for driving.[11]

On the other hand, given the relative ease of ascribing fault in automobile accidents[12], first party premiums will likely go up for drivers who have been at fault in previous

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11 Michael Trebilcock,"Incentive Issues in 'No Fault' Compensation"(1989) 39 University of Toronto Law Journal at 7.

12 According to Franklin J. Marryott (cited in Christopher J. Bruce,"The Deterrent Effects of Automobile Insurance and Tort Law: A Survey of the Empirical Literature" (1984),6 Law & Policy 67) in a study of 352 insurance claims, more than 90% involved uncontroversial evidence of fault. As well, a report (A.F. Conrad, Accidental Costs and Payments (1964), cited in Bruce at 70) indicates that less than 0.6% of automobile accident cases were sufficiently complex to require judicial resolution.

accidents. This will have the opposite effect on both care levels and activity levels. However, the first party premiums for these drivers will only increase to cover the increased first party insurance payments[13] that they themselves will receive. For this reason, the increase in first party insurance premiums for the at-fault-driver will be muted and, therefore, its effect on deterrence is likely to be dominated by the effect of the reduction of third party premiums for negligent drivers.

There are still other effects at work. To the extent that no-fault benefits allow the poor or seriously injured victim the financial flexibility to forego an expeditious settlement and instead go to court[14], claims against third party insurers of

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13 Because no-fault benefits are larger under an enhanced add-on no-fault regime.

14 Jeffrey O'Connell and Robert Joost, "Giving Motorists a Choice between Fault and No-Fault Insurance" (1986) 72 Virginia Law Review at 71. Osborne argues that if anything no-fault benefits in the Ontario add-on no-fault regime acted as a spur to litigation. Osborne,451. Several studies report little reduction in tort litigation in add-on states. See Daniel D. Caldwell,"No-Fault Insurance: An Evaluative Survey" (1977), 30 Rutgers Saw Review at 941-42 (Duff Part A,34). However, a recent study of Maryland's experience estimates that about 7% of eligible liability claimants did not file tort claims because of the availability of no-fault compensation. (See James K. Hammitt Automobile Accident Compensation, Volume II: Payments By Auto Insurers, (Santa Monica: The Institute for Civil Justice, The Rand Corporation,1985) at 57.) This might be merely a result of the extremely low level of no-fault benefits available (unlike the Osborne model) under the Maryland regime (maximum $2,500). This would not likely give the auto accident victim enough financial flexibility to forgo expeditious settlement, as would larger no-fault benefits, and so the only factor operating to affect the level of litigation would be the increase in fully compensated auto accident victims and those who have been compensated to an extent that they do not regard litigation, given its transaction costs, as utility enhancing.

negligent drivers will increase. This will increase care and activity-level deterrence. The final possible effect on deterrence is that resulting from a reduction in the costs of self-inflicted auto accident injuries resulting from negligence. In a pure tort regime such injuries are very costly since they go uncompensated, but under the Osborne model this is not the case.

With so many effects operating simultaneously it is by no means evident in theory what the deterrence effect of implementation of the Osborne model would be. Empirically, the answer is also uncertain. There is only one study that tests the effects of add-on no-fault in isolation from other variants of no-fault. That study of New Zealand and all the Australian states and territories from 1970-1981 found add-on no-fault legislation to have no appreciable effect on traffic fatalities relative to the tort system.[15]

(b) Compensation - The Victim Coverage Perspective

(i) Percentage of Victims Compensated:

It seems obvious that when one considers the percentage of traffic accident victims compensated to any extent, an add-on no-fault regime will be superior on that criterion to a pure tort law regime. In the latter regime, those who cannot succeed in a lawsuit, whether because of evidentiary difficulties or the absence of a negligent defendant, will not be compensated (aside

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15 R. Ian McEwin,"No-Fault and Road Accidents:Some Australasian Evidence "(1989), 9 International Review of Law & Economics 13.

from private or job related insurance, and general social programs like medicare or welfare). However, in an add-on regime all victims significantly injured in automobile accidents will qualify for no-fault benefits. The empirical evidence supports this contention:

Table 5.2

Medical Expenses Recovery (U.S. Data)[16]

(% of auto accident victims recovering any compensation by source)

	Tort	Add-On
Group Health	32%	34%
Other Auto Insurance	25%	26%
Own Auto Insurance	22%(uninsured coverage)	34%
Host Auto Insurance	8%	9%
No Payment from Any Source	22%	13%

Table 5.3

Wage Recovery (U.S. Data)[17]

(% of auto accident victims recovering any compensation by source)

	Tort	Add-On
Employers	32%	35%
Other Auto Insurance	26%	22%
Own Auto Insurance	6%	19%
Worker's Compensation	7%	3%
No Payment from Any Source	37%	32%

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16 J. Rolph, Automobile Accident Compensation, Volume I: Who pays How Much How Soon? (United States: Rand Corporation, 1985) 17.

17 Ibid.

Table 5.4

% of Victims Compensated from All Sources (U.S. Data)[18]

	Tort	Add-On
For Wage Loss	59%	70%
For Medical Loss	78%	87%
For Total Loss	80%	91%

Table 5.5

# of Auto Accident Victims Compensated Through Auto Insurance Per 100 Cars Insured in 1983 (U.S. Data)[19]

Tort	Add-On
0.92	1.37

(ii) Adequacy of Victim Coverage

There are no clear theoretical reasons for expecting that the extent of coverage for negligently injured individuals will differ as a rule under an add-on no-fault regime as opposed to a pure tort law regime. Those who would receive damages in tort are still able to sue and, therefore, may maintain the extent of

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18 R.Houchens, Automobile Accident Compensation, Volume III: Payments from All Sources (United States: Rand Corporation, 1985) 16.

19 U.S. Department of Transportation, Compensating Auto Accident Victims (1985) 73. This statistic has rightly been criticized on grounds that it ignores cross-state differences in both the number of vehicles driven and in injury rates. George Priest (1988) "Allowing Drivers a Choice Between No-Fault and Fault -Based Auto' Insurance: An Analytical Critique", Yale Law School. Nevertheless, it is likely that at least some difference remains even when these factors are taken into account. This study also reports that only 62.6% of those receiving add-on no-fault benefits would have received damages in tort.

their compensation. Those who would have had no viable case in tort will still receive no-fault benefits and, consequently, will be receiving compensation when they would not under a pure tort regime. However, as can be seen from Table 5.6 some empirical evidence appears to show a larger number of under-compensated auto accident victims under an add-on regime than under a pure tort regime in the cases that matter most, those with large total losses[20]:

Table 5.6[21]

Total Loss ($'s)		% of Auto Accident Victims from all sources		
		underpaid	exact	overpaid
1-55	tort	7	67	27
	add-on	5	64	31
56-141	tort	27	39	35
	add-on	28	41	31
142-468	tort	25	38	38
	add-on	33	26	41
469-80,000	tort	45	18	37
	add-on	53	17	29

On the other hand, this evidence is not consistent with the several studies which report little reduction in tort litigation in add-on states.[22]

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20 As well, the table shows a larger number of overcompensated auto accident victims in cases with low total losses. However,the study upon which Table 5.6 is based assumes that compensation for non-pecuniary loss entails overcompensation.

21 Houchens,20 (U.S. Study). The size of the last range of total losses is obviously far from ideal.

22 See Caldwell cited in note 14.

(c) Compensation - The Cost Internalization Perspective

Osborne argues convincingly that fairness in the allocation of the cost of automobile accident compensation requires the setting of premiums in accordance with sound insurance principles, that is, in such a way that accident costs are internalized to the drivers most likely to cause them. This process of risk-rating is done by differentiating premiums by reference to the driver's fault in previous accidents and his previous traffic violations, and by reference to the accident rate of the statistical group into which the driver falls. Given that automobile insurance is compulsory it may seem harsh to deny that there is an obligation to provide affordable premiums for all. However, as Osborne points out, while insurance is compulsory, driving is not.[23] This may be too simplistic, for in some parts of the country driving may be close to a prerequisite for employment, but on the other hand the negative deterrent effects resulting from the cross-subsidization by low-risk of high-risk drivers are potentially serious.

As noted above, it seems relatively easy to ascribe fault in most automobile accidents. This should mean that under the Osborne model, premiums can be effectively risk-rated. Of course, somewhat less attention will be paid to fault determination in accidents that do not result in a lawsuit than in those that do. Therefore, to the extent that the number of lawsuits is lower under the Osborne model than under a pure tort

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[23] Osborne, 513.

law regime, the precision of risk-rating will suffer[24].

The cases of motorcycles and trucks pose special problems for the setting of appropriate premium rates. Motorcycles cause relatively little damage to third parties, but motorcycle drivers and passengers are vulnerable to serious injuries. It follows that motorcycles pose an increased first party risk and a decreased third party risk as compared to cars. In a competitive insurance market first party premiums for motorcycles will be higher than those for automobiles, but premiums for the compulsory third party insurance will be lower. In an enhanced add-on no-fault regime, since the level of auto accident litigation is still significant, total third party liability costs are still large relative to no fault benefit costs (3.4 times larger[25]); therefore, third party premiums are still large relative to first party premiums. This means that the combination of a reduction in third party premiums and an increase in first party premiums for motorcyclists is still generous to motorcyclists, considering the total amount of accident costs that they cause.[26] Osborne's plan to reduce the

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24 Trebilcock, 33.

25 Calculated from the figures below on premium costs. Total third party liability is $ 203 per car under the Osborne model. Total no-fault benefits per car is $ 59.

26 Some might argue that motorcycles do not cause accident costs; rather the cars that collide with motorcycles cause accidents. Given that automobiles are the dominant vehicle on the road and that this fact is not about to change, we regard it as more appropriate from a deterrence perspective to view the presence of motorcycles on the road as the cause of the increased cost of the average motorcyclist injury as compared

first party premiums for motorcyclists by allowing subrogation[27] is, therefore, an ambiguous measure in terms of the cost internalization criterion. Subrogation does place the cost of the accident upon the insurer of the negligent automobile driver and thus is a positive measure in cost internalization terms. However, the insurer of the motorcyclist is released from paying the large differential between the actual accident costs and the costs that would have existed had the motorcyclist been driving an automobile. This is a negative aspect in terms of the cost internalization criterion. We would be inclined to think that this negative aspect dominates.

In the Osborne model, the first party insurance premiums for trucks are justifiably less than those of automobiles. This is because the occupants of trucks are less likely to incur injury and because the Workers' Compensation system will absorb much of the economic loss sustained by truck drivers.[28] As for third party premiums, those for truck drivers will be higher than those for automobile drivers, since trucks do more damage in collisions than automobiles.

As to whether the Osborne model does better than a pure tort

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with that of the average car driver injury and the decreased cost of the average injury of a driver hit by a motorcyclist as compared with that of a driver hit by another automobile.

27 Osborne,590. Subrogation means here that in the case in which the other party was negligent, the motorcyclist's first party insurer is entitled to reimbursement from the other party's third party insurer.

28 Ibid.

law regime at internalizing the costs of traffic accidents to driving activities generally, this is unlikely given that there is some kind of statistically equivalent subrogation arrangement (either individuated in Alberta or in 'bulk' form as in the Osborne model) with the insurance industry in both regimes. However, the fact that the collateral source rule is abolished in the Osborne model reduces the amount of compensation that is funded through driving activities generally, by reducing the amount of compensation that insurers must pay.

(d) Operational Efficiencies

As noted above it is not clear that an enhanced add-on no-fault system will reduce the number of lawsuits relative to a pure tort system.[29] However, to the extent it does so, administrative costs will be reduced; claimants' legal expenses, which are estimated to consume 10 to 15% of liability premiums in

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29 The U.S. experience suggests that the percentage of claims which are fault-related and the percentage of dollars which are spent on them are lower in add-on regimes than tort regimes, and that the percentage of claims which are no- fault and the percentage of dollars which are spent on them are higher in add-on regimes than tort regimes. The following table is taken from the All-Industry Research Advisory Council, Compensation for Automobile Injuries in the United States (1989),133.

Type of State Law	% of Fault-related Claims [incl. uninsur-motorist]	% of Fault-related Dollars	% of No-Fault Claims [incl. payment from extra medical ins.]	% of No-fault Dollars
Tort	70.3	89.9	29.7	10.1
Add-on	56.4	80.6	43.6	19.4

Canada [30], will be reduced, as will public expenditures on legal adjudication. The latter reduction could represent a significant saving; in California the public cost of the average jury trial in 1982 was $7,768 U.S.[31] Whatever the effect on the number of lawsuits, it appears that add-on no-fault regimes are more efficient, since in the U.S., the average add-on no-fault state returned about 53.6% of each premium dollar to injured victims (i.e. them alone, not including money payable to their lawyers)[32], while the comparable payout/payin ratio in the average pure tort state was only 43.2%.[33]

Operational efficiencies will certainly be realized in the Osborne model in the more rapid initiation of the flow[34] of

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30 Ontario Law Reform Commission, Report on Motor Vehicle Accident Compensation, (Toronto: Ministry of the Attorney General, 1973), at 15,42. Osborne vol.I (1988) at 258 (figure 7.7).

31 Rand Corporation's Institute for Civil Justice, Kakalik Ross, Costs of the Civil Justice System (1983) at XV

32 The methodology used to factor out the money going to lawyers involved using figures from the U.S. Dept. of Transport study of auto insurance in 1970. That study found legal costs to amount to 25% of total recovery under tort for serious injury or fatality cases. In the 1985 study it was assumed that this level of legal costs applies to all auto accident cases. The amount of liability payout in each state was multiplied by 0.75. U.S. Dept. of Transport,82.

33 Ibid, 83 and making calculations based on data from p.84. In one respect, this comparison exaggerates the differences between tort and no-fault jurisdictions, since it does not include first-party-medical insurance sold in tort states.

34 It is the initiation of payments, not the timing of the final payment, which matters most to the insured.

compensation payments.[35] The empirical evidence for U.S. i.e. that payments in tort awards or settlements were much slower than those for first party insurance claims:[36]

Table 5.7

Percentage of Victims Who Have Received Their First Payment Per Month(U.S.data)

	< 1 month	< 2 mo.	< 3 mo.	< 6 mo.	> 6 mo.
liability claims[37]	26.8%	----	46.2%	61.9%	38.1%
first party claims	37.1%	----	80.6%	93.5%	6.5%

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35 This is especially important in cases in which the economic loss is large,since that is when the delay is greatest under a pure tort regime,as well as being when the need for rapid payment is most critical.

36 U.S. Dept. of Transport, 79. (Duff,part C, 40) Since tort delay is based on the duration between the accident and settlement, and no-fault delay measures the time between claim filing and first payment, this comparison exaggerates the difference between the two systems. Nevertheless, since only about 10% of tort claims obtain advance payments before final settlement, and there is little reason to delay filing first-party claims, any exaggeration is probably slight.

37 For liability claims the first payment is also the final payment.

Table 5.8

Timing of Payment - Report of Injury to Final Payment[38]

		Days				
		0-3	31-90	91-180	81-365	>365
	Cumulative % of claimants	18.5	33.8	50.5	73.2	100
Liability Claims						
	Cumulative % of dollars	2.3	7.8	19.8	45.9	100
	Cumulative % of Claimants	12.7	42.4	67.2	86.1	100
First-Party Claims						
	Cumulative % of dollars	2.7	13.0	31.0	54.9	100

To the extent that the Osborne model expands the role played by first party insurance, faster compensation will occur than under predominantly third party insurance schemes.

As to delays to final payments, figures are only available on no-fault regimes in general (add-on and threshold together).

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38 All-Industry Research Advisory Council, Compensation for Automobile Injuries in the United States (1989), 51.

Table 5.9

Percentage of Final Compensation Received Over Time (U.S. Data)[39]

	Tort	No-fault
Within 30 days	8.3%	33%
Within 1 year	51.7%	95.5%

Priest argues that these figures are misleading, and that in terms of th number of separate claims paid the differences in timing are much smaller. He cites the following table from the U.S. Department of Transportation 1985 study to corroborate his point:

Table 5.10

Payment Timing: Report of Injury to Final Payment, Cumulative % of Claimants (U.S. Data)

Days	**Fault**	**No-Fault**
0-30	23.2%	19%
0-90	41.8%	56.9%
0-180	58.2%	79.1%
0-365	76%	92.5%
>365	100%	100%

Osborne argues that prompt payment of compensation is crucial because i promotes early rehabilitation.[41] Note that rehabilitation is not affecte by a long delay in final payment if the payment flow is started promptly.

(e) Premium Costs

The premium structure of the Osborne model is as follows:

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39 U.S. Department of Transport (1985) at 79.

40 Priest (1988) at 18.

41 Osborne,456.

Table 5.11

Cost Breakdown (in $) Per Car (for Ontario)[42]

	Current	Proposed	Change
No Fault Benefits			
Rehab.,Long-term Care, Medical	7.72	18.56	10.84
Funeral	0.22	0.88	0.66
Death	1.20	3.47	2.27
Disability - wage earner	13.57	30.94	17.37
- student	nil	2.58	2.58
- homecare	n.a.	0.16	0.16
- child care	nil	2.29	2.29
Total No Fault Benefits	22.71	58.88	36.17
Third Party Liability			
Bodily injury claims[43]	198.64	173.67	-24.97
Adjustment expense	29.68	29.68	nil
Total third party liability	228.32	203.35	-24.97
Other			
Property damage	78.76	78.76	nil
Plan for accidents in Quebec	0.92	0.46	-0.46
Uninsured motorist	8.55	6.81	-1.74
Total other	88.23	86.03	-2.20
Compensation Issues			
Abolishing collateral source rule	n.a.	-6.62	-6.62
Reduction of Prejudgment interest[44]	n.a.	-9.14	-9.14
Reduction of party-and-party costs[45]	n.a.	-5.76	-5.76
Total compensation Issues	n.a.	-21.52	-21.52
TOTAL LOSS COSTS	339.26	326.74	-12.52

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42 Osborne,586.

43 A consequence of a reduced number of lawsuits. The increased financial flexibility effect is assumed not to be a factor. Joe S. Cheng claims surveys in Osborne, vol.II, 640-1.

44 It was over compensatory at the time.

45 Manitoba, Saskatchewan, and British Columbia all have party-and-party costs set at a lower rate. Osborne, 570.

There may be a number of problems with the above estimates. One is that the cost savings resulting from the abolition of the collateral source rule may be overestimated. Osborne has failed to take account of the rational response to such a policy: people may simply eliminate auto accident insurance from the collateral source coverage. It is also misleading to count the cost savings that fall under the heading of "Compensation Issues" as part of an enhanced add-on no-fault regime . These result from general tort reforms,which could be incorporated into a pure tort law regime. If this point is accepted, the introduction of enhanced add-on no-fault benefits appears to lead to an increase in costs of coverage per car. Given the U.S. experience, this is what one would expect. According to one report, between 1971 and 1977, premium increases in add-on states were more than twice as large as those in pure tort states.[46] From 1976 to 1983, this difference was less pronounced, with add-on states experiencing an average premium increase of 40.75, compared to 35.3% in pure tort states.[47] Of the four states that have introduced add-on no-fault compensation systems since 1984, all but one is estimated to have experienced increased overall automobile injury coverage costs as a result of the change from tort regimes:

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46 Daniel D. Caldwell, "No-Fault Automobile Insurance: An Evaluative Survey" (1977) 30 Rutgers Law Review,965.

47 Department of Transport, (1985) at 70.

Table 5.12

Increase in Overall Auto Injury Insurance Costs[48]

	1982-3	1987-8
Delaware	17%	59%
Maryland	26%	26%
Pennsylvania	--	37%
Oregon	-8%	-3%

48 Jeffrey O'Connell,"No-Fault Auto Insurance: Back By Popular (Market) Demand?" (1989), 26 San Diego Law Review,998. We have no explanation for the anomalous behaviour of costs in Oregon.

CHAPTER 6

THRESHOLD NO-FAULT

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I DESCRIPTION OF THE MODEL

The recently adopted Ontario no-fault system will serve as our exemplary model for a threshold no-fault regime. In this model,there are extensive no-fault benefits, similar to the enhanced add-on model, but access to the tort system is now precluded except in the case of "death, permanent serious disfigurement, or permanent serious impairment of an important bodily function caused by continuing injury which is physical in nature."

As in the Osborne model, the collateral source rule is abolished. Tort damages or no-fault benefits are secondary to payments for loss of income received or available under the laws of any jurisdiction (presumably including U.I.C. benefits and Canadian Pension Plan long-term disability benefits) or under income continuation benefit plans (private or employment related), and to payments received under sick leave plans arising by reason of occupation or employment. Old age security benefits, however, are not deductible. Again, no-fault benefits are deducted from any tort damage award.

The no-fault benefits are primary to any medical, surgical,dental, or hospitalization benefits payable under any Act administered by the Ministry of Community and Social Services.[1] As well, OHIP no longer is subrogated to the rights

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1 Insurance Board of Canada, Bulletin No. Ontario 216, Nov. 22, 1989.

of automobile accident victims.[2]

As in the Osborne model, the minimum coverage for third party liability is set at $200,000.

Table 6.1

No-Fault Benefits:

Add-on Model (for comparison)	Threshold Model[3]
Rehabilitation & Medical Not Covered by OHIP $500,000 per claim maximum. Time limit: 10 years or 20 years less victim's age[4], whichever is longer.	Same
Long-term Care $500,000 per claim maximum. Benefits not to exceed the monthly cost of group residence which might reasonably accommodate victim's needs.	Same Benefits not to exceed $1,500/ month.[5]
Disability Income Benefits 1) Employed 80% of gross income, to maximum of $450 per week. Secondary to collateral benefits, except U.I.C.[6] benefits Age 16 or over 7-day waiting period	80% of gross wages, to a maximum $600 per week for 3 years or life totally disabled. Additional coverage over the $600 max. may purchased to bring the overage up 90% of gross wages. This ex coverage is not secondary to basic no-fault coverage[7]
2) Deemed to be Employed Claimant must have worked 6 out of last 12 months. 80% of gross income, to maximum of $450 per week Age: between 18 and 65 60-day waiting period	To qualify, claimant must h worked 6 out of last 12 months. immediately above

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2 Insurance Board of Canada,Bulletin No. Ontario 41, June 22, 1990.

3) Students
Elementary school:$1,000 for loss of school year;
$340 per week at age 19 if still disabled and not attending school.
Secondary school: $2,000 for loss of school year;
$340 per week at age 19 if still disabled and not attending school.
College/University: $4,000 for loss of school year;
$340 per week when no longer entitled to loss of school year benefits.

{$185 per week for 3 years, or life {if totally disabled

Disability Benefit For the Unemployed
N.A.

{$185 per week for 3 years, or life {if totally disabled.

Homemaker Disability Benefit
N.A.

{As immediately above.

Child Care
In case of injury to provider of child care, $200 per week plus $50 per week per dependent child to maximum $350 per week. No waiting period. Payable for 2 weeks without proof of expenses inc; then payable with proof of reasonable expenses incurred.

In case of injury to provider of child care, $50 per child per week. Maximum $200 per week

Household Care: house-keeping, meal preparation, grass cutting etc.

$50 per week payable on basis of reasonable expenses incurred.

Death Benefit
For death of head of household or spouse of head of household: $25,000 plus $10,000 more for each dependent
For death of a dependant child: $10,000

For death of head of household or spouse $25,000

For death of dependant child: $10,000

Funeral Expenses
$3,000

$3,000.

Collision Coverage (for damage to automobile) same as former Ont. regime	Coverage is in proportion to the degree the driver is not at fault, i.e. if the driver if 25% at fault, then 75% of the damage is covered.
All benefits, except the death indexed once a year to annual consumer price index, subject to a maximum of twice the stipulated benefit. *	Benefits will be reviewed at least every 2 years.

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*3. The no-fault benefits are available to all accident victims who sustain physical, psychological or mental injury. The FAIR committee expressed concern that a parent who witnessed the injury of his or her child and suffered psychological injuries as a consequence would not be eligible for no-fault benefits. Imants Abols, legal counsel in the Ministry of Financial Institutions states that such a witness would be considered an accident victim. The No-Fault Benefits Schedule states that "insured person" includes a person who is not the occupant of an automobile who suffers physical, psychological or mental injury as a result of an accident. It is not clear that Abols interpretation is uncontroversial. The CBAO has pointed out that self-employed individuals who fall under the threshold will be ineligible to recover for loss of profit and losses associated with disruption of business.

4. The latter time period allows children under the age of 10 the extra time which they sometimes need to be rehabilitated.

5. I.B.C., Bulletin 216.

6. Unemployment Insurance Canada

7. If an individual earns $52,000 per year or $1,000 gross weekly income she can purchase extra no-fault coverage so that she will recover an additional $200 per month above the basic $600 per month, or $800 per month (80% of her gross weekly income).

II EVALUATION OF THE MODEL

This section will evaluate the threshold model taking the add-on model as our benchmark.

(a) Deterrence/Prevention

The threshold in the new Ontario system is set relatively high, being somewhat more restrictive than that of Michigan[8], which has the effect of limiting lawsuit eligibility to about 12%[9] of those collecting no-fault benefits.[10] As a consequence, one would expect that deterrence for risky driving behaviour is reduced relative to that of the Osborne model. As will be recalled, under the Osborne model the effect of the reduction of third party insurance premiums for negligent drivers is likely to dominate the effect of the increase in first party insurance premiums for those drivers. Under the threshold regime, this effect is magnified because since there will be fewer

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8 Whereas the Ontario threshold is worded "death, permanent serious disfigurement, or permanent serious impairment of an important bodily function caused by continuing injury which is physical in nature", the Michigan threshold is not qualified by the word "permanent", nor the phrase " caused by continuing injury which is physical in nature".

9 Rolph (1985) at 19. In other words, about 88% of claimants cannot sue in tort. Minister of Financial Institutions, Murray Elston predicts that 90% of claims will be excluded from the tort system under the present Ontario scheme.(Statement to Ontario Legislature,Oct. 23,1989)

10 In Michigan about 36% of claimants are barred from tort actions who would have been eligible under a traditional tort regime. All-Industry Research Advisory Council, Compensation for Automobile Injuries in the United States (1989), 133d 150..

lawsuits than under an add-on regime and, therefore, more instances in which the third party insurer of the negligent driver will not be forced to cover the full costs of the other driver's[11] losses, the reduction of third party premiums for previously negligent drivers will be greater.

Although motor vehicle accidents are relatively amenable to fault determinations, as the number of drivers whose conduct is subject to review under the tort system is reduced it is likely that the information upon which individuated risk ratings could be based will be attenuated. This may lead to the further weakening of deterrence under a threshold no-fault model.[12]

The implementation of systems that diverge progressively further from a fault-based tort system may in the long run have a further negative effect on deterrence in that they may socialize drivers so as to regard risk-taking as divorced from blameworthiness.[13] If such a process were, indeed, long-term it would not be surprising if it were undetectable at this time. The empirical evidence is less clear about the effects of the introduction of a threshold no-fault regime. Two U.S.studies

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11 Or passenger or pedestrian. In the new Ontario system passengers and pedestrians claim on their own auto insurance,if they have it.

12 Michael Trebilcock, "Incentive Issues in 'No-Fault' Compensation" (1989 39 Univ. of Toronto L.J. at 33.

13 White cited in: The Honourable Mr. Justice Coulter A. Osborne, Report of Inquiry into Motor Vehicle Accident Compensation in Ontario, vol. 1 (Toronto: Ontario Ministry of the Attorney General and the Ministry of Financial Institutions, 1988) at 535.

originally indicated likely negative effects on deterrence. A regression analysis by Medoff and Magaddino[14] found increased loss rates compared to tort jurisdictions of 7.449% in the states with the most significant thresholds, of 6.308% in threshold jurisdictions as a whole, and of 3.955% in add-on and threshold jurisdictions as a group. A study by Landes[15] reported similar,but more alarming results. She estimated that states with "relatively modest restrictions on tort suits" experienced between 2 and 5 percent more fatal accidents as a result of adopting no-fault, while states with more restrictive laws experienced as many as 10 to 15 percent more fatal accidents.

However, these studies have come under severe criticism. In the Medoff and Magaddino study there is a methodological problem in that there is a large number of independent variables relative to the small sample size. As well the choice of the liability loss rate as the dependent variable is problematic since its increase could reflect just as well a rise in average claim costs, a fall in average premiums, or a drop in the number of insured vehicles, as an increase in the number of accidents. While the authors reject the possibility of a rise in average claim costs, the evidence upon which they base these conclusion

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14 Marshall H. Medoff and Joseph P. Magaddino,"An Empirical Analysis of No-Fault Insurance" (1982), 6 Evaluation Review 373.

15 Elizabeth M. Landes, "Insurance,Liability and Accidents: A Theoretical and Empirical Investigation of the Effect of No-Fault Accidents" (1982), 25 Journal of Law and Economics, 49.

is limited.[16] They do not address the possibility of any decrease in average premiums per vehicle.[17] The Landes study is also open to several criticisms. On a basic conceptual level, critics have questioned her use of fatal accidents as a dependent variable. O'Connell and Levmore argue that because all tort thresholds examined by Landes are exceeded in the case of any accident causing death, the choice of fatal accidents as a dependent variable is a curious test of tort law's deterrence effect.[18] Since tort incentives to avoid motor vehicle fatalities are unaffected by U.S. legislation, they argue it is hard to explain why no-fault jurisdictions should experience any increase in such accidents.[19] So too, emphasizing the limited

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16 Medoff and Magaddino (1982) at 383 (reporting that average claim costs fell in Massachusetts and Florida during the year after the introduction of no-fault in those states)

17 Which is, after all, one of the avowed objectives of the introduction of a threshold regime.

18 Jeffrey O'Connell and Saul Levmore, " A Reply to Landes: A Faulty Study If No-Fault's Effect on Fault?" (1983), 48 Missouri Law Review, 650-1; Paul S. Kochanowski and Madelyn V. Young, " Deterrent Aspects of No-Fault Automobile Insurance: Some Empirical Findings"(1985),52 Journal of Risk &Insurance, 285; Paul Zador and Adrian Lund, "Re-Analysis of the Effects of No-Fault Auto Insurance on Fatal Crashes"(1986), 53 Journal of Risk & Insurance, 228.

19 On the other hand, an increase in fatal accidents might be expected if drivers perceive only the existence of no-fault but not its limits, or alternatively if threshold no-fault reduces care levels at the margin but drivers are unable to distinguish between driving patterns that increase the risk of fatal and non-fatal accidents. Nevertheless, as O'Connell and Levmore point "there are grave difficulties in assuming that drivers are superrational and, at the same time, psychologically induced to be irrational. The hypothetical driver who carefully accounts for (or acts as if he so calculates) probabilities and thresholds and, with technical

extent of legal constraints in most U.S. threshold states, Zador and Lund are sceptical about the likelihood of significant changes in driving behaviour attributable to no-fault legislation. Since most threshold states abolished tort law only for relatively minor injuries, leaving major injuries and property damage to the tort system, and since injury claims without associated property damage are extremely rare, the extent to which at-fault drivers were penalized by higher insurance premiums was largely unaffected by no-fault laws.[20] Thus, a substantial reduction of liability-induced precautions (to whatever extent that they exist) seems implausible.

More recent empirical work has not supported the findings of the above studies. In a recent attempt by Zador and Lund to replicate Landes' study with data covering the period 1967-1980, the coefficients of all legal variables were insignificantly different from zero.[21] Kochanowski and Young, using a model

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precision,discounts his own injuries, is hardly the same human who is fooled into causing fatalities by small changes in the medical expense threshold." O'Connell and Levmore(1983) at 651. While this argument works against the assumption that fatal accidents increase because drivers only perceive the existence of no-fault, not its limits, it does not necessarily work against the assumption that drivers are unable to distinguish between driving patterns that increase the risk of fatal and non-fatal accidents, since the skill required to determine that premium increases for negligent drivers have been reduced is of an entirely different kind than the skill required to distinguish between the driving patterns that increase the risk of fatal and non-fatal accidents.

20 Zador and Lund, 235.

21 Zador and Lund, 233.

which explained 60% of state variation in fatal accidents from 1975-1977, found no significant relationship between no-fault and the rate of fatal accidents.[22]

It is, therefore, difficult to support empirically our earlier hypothesis about the relative deterrence of effects add-on no-fault and threshold no-fault systems. However, one must remember that most U.S. threshold systems (unlike Michigan) have very low thresholds. In the U.S., therefore, it is not very surprising that a differential in terms of deterrence cannot be clearly demonstrated. Such a difference would be more surprising in a study of the comparative deterrence effects of add-on regimes and high threshold regimes, like the new Ontario system.

(b) Compensation - The Victim Coverage Perspective

(i) Percentage of Victims Compensated:

It would seem that in considering the percentage of auto accident victims that are compensated to any extent, the difference between enhanced add-on no-fault and threshold no-fault would be largely insignificant. In an add-on regime all those who sue are also eligible for no-fault benefits. This means that although a threshold regime will bar a number of accident victims from compensation through the tort system it would not deprive any of these claimants from no-fault compensation.

The U.S. empirical data does, however, indicate that there

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22 Kochanowski and Young,269.

are some differences between the systems:

Table 6.2

Medical Expenses Recovery (U.S. Data)[23]

(% of auto accident victims recovering any compensation from the source)

	Threshold	Add-On
Group Health	33%	34%
Other Auto Insurance	9%	26%
Own Auto Insurance	39%	34%
Host Auto Insurance	10%	9%
No Payment from Any Source	18%	13%

Table 6.3

Wage Recovery (U.S. Data)[24]

(% of auto accident victims recovering any compensation from the source)

	Threshold	Add-On
Employers	46%	35%
Other Auto Insurance	6%	22%
Own Auto Insurance	36%	19%
Worker's Compensation	5%	3%
No Payment from Any Source	24%	32%

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23 J. Rolph, Automobile Accident Compensation, Volume I: Who pays How Much How Soon? (United States: Rand Corporation, 1985) 17.

24 Ibid.

Table 6.4

% of Victims Compensated to Any Extent from All Sources (U.S. Data)[25]

	Threshold	Add-On
For Wage Loss	77%	70%
For Medical Loss	83%	87%
For Total Loss	87%	91%

Table 6.5

# of Auto Accident Victims Compensated Through Insurance Per 100 Cars Insured (U.S. Data)[26]

Threshold	Add-On
1.84	1.37

It is important to keep in mind the fact that these data exaggerate any differences in the percentage of auto accident victims compensated at all between the Osborne model and the new Ontario system. This is because the no-fault figures are from American states with very minimal levels of no-fault benefits. The two regimes that we are considering are quite comparable as to the level of no-fault benefits. It is interesting to note, though, that even given the limitations of the data, neither regime is superior on all counts: add-on no-fault is superior in

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25 R. Houchens, Automobile Accident Compensation, Volume III: Payments from All Sources (United States: Rand Corporation, 1985) 16.

26 U.S. Department of Transportation, Compensation Auto Accident Victims (1985) 73.

medical recovery and threshold no-fault is superior in wage recovery although the latter superiority seems to depend upon a greater incidence of employment-related compensation in threshold states, and so is somewhat artificial.

(ii) Adequacy of Victim Coverage

The no-fault benefits provided under the Osborne model and the present Ontario regime are quite similar,the main differences being a somewhat higher income benefit under the Ontario plan along with a lower student disability benefit. Where the two systems differ significantly in terms of extent of victim coverage is in the compensation for non-pecuniary and psychological injury losses. Under the Ontario scheme the large proportion of otherwise potential plaintiffs whose injuries fall below the threshold are barred from recovery in tort. This means that those with moderate non-pecuniary losses do not recover them and those with relatively high incomes do not receive full compensation for income loss. As well, psychological injuries never pass the threshold and, therefore, those who suffer from them do not recover non-pecuniary losses no matter how great their suffering has been and/or will continue to be.

The following chart, which assumes (controversially) that any compensation greater than economic loss is over-compensation, indicates that payments under an add-on system are often greater than those under threshold no-fault:

Table 6.6[27]

Total Loss ($'s)		% of Auto Accident Victims underpaid	exact all	overpaid from sources
1-55	threshold	11	71	18
	add-on	5	64	31
56-141	threshold	27	49	23
	add-on	28	41	31
142-468	threshold	30	44	26
	add-on	33	26	41
469-80,000	threshold	49	17	26
	add-on	53	17	29

Those accident victims who are barred from the tort system under the new Ontario regime are not only deprived of non-pecuniary losses. Those who had been earning more than $39,000 per year will also not recover full compensation for their economic losses.

(c) **Compensation - The Cost Internalization Perspective**

As argued above in the section on deterrence, it may be the case that the threshold regime is less conducive to individuated risk rating. If this is the case the burden of automobile accident compensation will not be borne as fully by high-risk drivers as under either add-on no-fault or pure tort regimes.

The problem with allowing subrogation in the case of motorcycle-automobile accidents, discussed above with respect to the Osborne model, once again arises in the new Ontario scheme,

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27 Houchens, 20. U.S. Study. The size of the last range of total losses is obviously far from ideal.

which allows subrogation in cases in which payments are over $2,000. Under a threshold regime, third party insurance premiums will still be of significant size relative to first party premiums. This means that the combination of the reduction in third party premiums and the increase in first party premiums that motorcyclists will face relative to automobile drivers is still fair to motorcyclists, considering the total amount of accident costs that they cause. That is to say, that even in a threshold regime, subrogation for motorcycles may, on balance, be a regressive measure in terms of the cost internalization criterion. This potentially regressive measure in the new Ontario system, however, is balanced by the progressive measure of granting insurers of automobiles subrogation rights against the insurers of commercial vehicles exceeding 4,500 kilograms.[28] It is true that even without such subrogation rights the differential between typical accident costs caused by "trucks" and those caused by automobiles is reflected in increased third party premiums relative to automobile drivers and in reduced first party premiums relative to automobile drivers. However, from a cost internalization perspective it is desirable for negligent drivers to bear the costs of the accidents that they cause, which is what occurs when subrogation exists.

Another inequity in the new Ontario plan is that those innocent victims of automobile accidents whose losses fall below the threshold are paying a unjust share of the cost of automobile

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[28] I.B.C., Bulletin Ontario 217, p.2.

accidents in that they are forced to forego their full corrective justice entitlements[29], namely, their non-pecuniary damages (and in the case of previously high income earners, full compensation for income loss). Even if one argues that most accidents are caused by driving errors which are morally non-culpable[30], some accidents result from morally culpable error.

In comparing the new Ontario system to the Osborne model with respect to the internalization of the costs of traffic accidents to driving activities generally, there are a number of factors to consider. One relevant factor is that the two plans espouse abolition of the collateral source rule; therefore, one would expect little difference in the degree of cost internalization to driving activities generally.

However, there is another relevant factor with respect to the degree of the cost internalization of accidents in the new Ontario system. The new Ontario plan has eliminated the right of subrogation for OHIP. This embodies a significant shift of the cost burden away from drivers in that OHIP had been receiving approximately $48 million per year as a bulk subrogation payment under the old Ontario system.[31]

On balance it appears that the new Ontario regime will be significantly worse than the Osborne model in terms of

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29 See Chapter One.

30 See Chapter Two.

31 Globe & Mail, August 7, 1990, p. A-4.

internalizing the cost of automobile accidents within the driving population.

(d) Operational Efficiencies

As noted above, the Michigan auto accident compensation plan, which is similar in many respects to the Ontario system, eliminates about 90% of no-fault claimants from the tort system. However, this reduction in law suits does nothing to limit the largest and,therefore, most expensive lawsuits. As well, legal costs will to some extent shift into litigation over the issue as to what cases fall above or below the threshold. This is especially true in verbal threshold systems, such as Ontario's.[32] It is for these reasons that Osborne is sceptical that administrative costs savings will be very large for systems like that of Ontario's.[33] There will be some savings since adjusters will not need to investigate fault in cases that are clearly below the threshold.[34] Still,the legitimacy and extent

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32 As for disputes over entitlement to no-fault benefits, a new dispute resolution system is in place. Under this system, disputes will first be referred by either the insurer of the insured person to compulsory mediation. If mediation fails, an insured person will have the option of proceeding by way of arbitration or litigation to resolve the claim. Ontario bill 68.

33 Osborne, vol. I, 523-4. Even in a pure no-fault regime Osborne predicts a mere 5% increase in the payin/payout ratio. A threshold regime could not even do this well.

34 A system which significantly differentiates premiums on grounds other than court adjudicated determinations of fault leads to somewhat increased due process concerns -demands for arbitration and appeal procedures- over rate classification. One would expect a slight increase in

of injuries will remain matters for investigation.

It may be that Osborne overstates his point somewhat. A U.S. Department of Transport study showed a reduction in the number of lawsuits of 31.3% in Michigan. [35] Even if the number of lawsuits eliminated are small, given that the public cost of the average jury trial in California is $8,300 U.S.[36], one would think the saving is still likely to be significant. However, other empirical evidence does,indeed, support Osborne. On average, add-on states return a higher percentage of the premium dollar to traffic victims (alone, apart from their lawyers)[37] as compared to verbal threshold states (53.6% vs. 47.8%).[38]

With respect to the other form of operational efficiency with which we are concerned - the speed at which the flow of payments is begun-one would not in general expect a threshold regime to be any more efficient than the enhanced add-on plan. Nevertheless, the new Ontario system may be more efficient than the Osborne model. This is because it implements a penalty payment of 2% of the total claim value per month for insurers who

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administrative costs in this area.

35 Dept. of Transport, 83.

36 Rand Corp.'s Institute for Civil Justice, cited in Dewees, II-62. This figure may be misleading since jury trials are not common in Ontario.

37 See note 28.

38 Calculated from figures presented in Dept. of Transport at 84. It is interesting to note that Michigan, itself, returns a comparatively high 55.1% of the premium dollar.

do not initiate payment within 10 days of proof of income loss and 30 days of proof of other economic losses, such as rehabilitation and care benefits.[39]

(e) Premium Costs

Without the implementation of the new Ontario plan, the government claims that premium costs would have had to increase 30-35% in 1990. Automobile insurers in Ontario claimed that prevailing premiums and investment income were insufficient to cover loss costs. Under the present scheme, premiums will only rise in the Oshawa-Toronto-Hamilton corridor where there will be a premium rise of 8%. This apparently means that, as compared to the old unenhanced add-on no-fault plan, there will be an effective drop in premiums of 30-35% outside the corridor and 22-27% inside the corridor. As can be calculated from the total loss costs figure in the premium costs section in chapter 5, the estimated premium cost saving resulting from implementation of the Osborne model was 3.7% relative to the old unenhanced add-on no-fault plan. According to these figures the new threshold system is very much more effective in reducing premium costs.

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39 O. Reg. 273/90, s. 24. While Osborne recommends that no-fault benefits be paid within 15 days of insurers receipt of required documentation, no penalty is possible, Osborne, Vol. I, 604.

CHAPTER 7

PURE NO-FAULT

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Table 7.1

Threshold Model (for purposes of comparison)	Quebec Plan[4]
Rehabilitation & Medical Not Covered by OHIP $500,000 per claim max. Time limit 10 years or 20 year less victim's age,[6] whichever is longer	Pays costs of the Regie-approved rehabilitation program. The program extensive.[5]
Long-Term Care $500,000 per claim max. Benefits not to exceed $1,500/month.[7]	Long-Term Care at Home $200 weekly (about $570,000 for 50 years). If continuous personal supervision is required, $500 weekly $1.3 million for 50 years
Lump-sum for Permanent After-effects of Injury (Non-pecuniary Loss) N.A.	$75,000 per claim maximum. $100,000 after 1 January 1991 and $125,000 after 1 Jan. 1992.
Disability Income Benefits 1) Employed 80% of gross wages, to a maximum of $600 per week for 3 years of life if totally disabled. Additional coverage beyond the $600 max. may be purchased to bring the coverage up to 80% of gross wages. This extra coverage is not primary to the basic no-fault coverage.	90% of net[8] income. Qualifying gross income cannot exceed $40,000[9]. Income benefits are secondary to Quebec Pension Plan disability pension or similar plans.
2) Deemed to be Employed To qualify, claimant must have worked 6 out of last 12 months. As immediately above.	2) Temporary or Part-time Employment During first 180 days: As immediately above. After 180 days: the benefit is based upon the gross income from the type of employment that the Régie presumes the victim would have had were it not for the injury.

3) Students $185 per week for 3 years, or life if totally disabled.	Elementary school $3000 for loss of each school year. Secondary school: $2,000 for loss of each school year; If disability persists beyond the school year during which the victim turns 16 the benefit is based upon the average Québec earnings per year ($24,099). College/University: $5,500 for loss of each term to a maximum of $11,000 per year. If the disability persists beyond the scheduled end of studies, the income benefit is based upon average Québec earnings per year.
Disability Benefit For the Unemployed $185 per week for 3 years, or life if totally disabled.	a) For the Unemployed Capable of Working During the 1st 180 days after the accident the benefit is based upon the greater of: 1) gross income from employment the victim would have held were it not for the accident; 2) unemployment benefits lost because of the accident. After 180 days, the benefit is based on gross income from the type of employment that the Régie presumes the victim would have had were it not for the injury. b) For the Unemployed Constitutionally Incapable of Working No income benefit.
Homemaker Disability Benefit As immediately above.	N.A.
Substitute Labour Costs For a Family Business N.A.	Reimbursement to a maximum of $500 weekly for first 180 days for costs of hiring substitute labour to replace unpaid family member.
Child Care In case of injury to provider of child care, $50 per child per week. Maximum $200 per week. Household Care: housekeeping, meal preparation, grass cutting etc.	Reimbursement of Care Expenses For the full-time employed, temporarily employed, and students: $75 for the care of 1 person; $100 for 2; $125 for 3; $150 for 4 or more. For the part-time employed and the unemployed who were capable of working; $250 for the care of 1 person; $250 for 2; $310 for 3; $340 for 4 or more.

Death Benefit For death of head of household or spouse $25,000	For death of head of household or spouse It depends on the victim's age and incom Min. of $40,000 to max. of $200,000 to surviving spouse. Depending on the age of other dependent, $19,000 to $35,000 to that dependent. If the dependent is disabled at the time of the victim's death: additiona $16,500. Children of a single parent family and other dependents are entitled also to equal shares of the spousal benefit.
For death of dependent child: $10,000.	For death of a victim without spouse or dependent: $15,000 to parents.
Funeral Expenses $3,000.	$3,000

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II EVALUATION OF THE MODEL

(a) Deterrence/Prevention

In the threshold model we were concerned that deterrence is relatively weak since total premiums for negligent drivers fall

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*4 Compensation Table for Accidents Occurring between January 1 and December 31,1990, Régie de l'assurance automobile du Québec. The benefits are not subject to tax.

5 Osborne, at 462-3. By the Québec Automobile Insurance Act, s. 155.1 the Régie must also transfer an annual lump sum amount to medicare. In 1990 the amount is 68 million.

6 The latter time period allows children under the age of 10 the extra time which they sometimes need to be rehabilitated.

7 I.B.C., Bulletin 216.

8 After income tax, unemployment insurance premiums and pension plan contributions.

9 So the weekly maximum will necessarily fall under $690. It will likely be much under $690.

relative to those of the enhanced add-on no-fault model (as the number of lawsuits decrease, third party premiums fall and this decrease is not fully matched by increases in first party premiums), and because relative to the enhanced add-on regime information relevant for purposes of risk-rating is less accessible. These relative disadvantages should be even more evident in a pure no-fault regime, where there is no third party insurance for bodily injury at all, and where there are no trials in which to make fault determinations. As well, the pure no-fault regime diverges from the fault-based tort system even more sharply than the threshold regime. Consequently, one might expect that in the long run, deterrence might be further undermined relative to the threshold regime as drivers are socialized, to an even greater extent, to regard risk-taking as divorced from blameworthiness.

The deterrence problem is apparently much magnified in the Québec plan relative to pure no-fault systems generally because of its flat premium rating system. One would expect the reduced premiums for risky drivers to have a negative effect on care-levels and the reduced premiums for young, male drivers, whose demand for driving is highly price elastic, to have an undesirable effect on the activity levels of risky drivers.[10] Gaudry's empirical study of the Québec system appears to show as much. In his study, looking only at the first twelve months of the new regime, the reforms were associated with a 26.9 percent

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[10] Gaudry, 9.

increase in all automobile accidents, a 26.3 percent increase in accidents involving material damages above a specified amount (despite the fact that this amount increased from $200 to $250), a 31.8 percent increase in accidents with at least one injury (no deaths), and a 7.0 percent increase in automobile fatalities.[11] While the larger figures probably contain a substantial reporting bias[12],the reported impact on the number of fatal accidents is free of any such bias. Gaudry attributes the effects that he derives not to the no-fault scheme itself, but instead partly to more stringent enforcement of compulsory insurance, leading previously uninsured drivers to drive with less care[13], and partly to the adoption of the flat-rate premium structure.[14] While emphasizing the difficulty of distinguishing among different components of the 1978 reform, he concludes that:

> previous moral hazard experience with compulsory automobile insurance and the very strong evidence of adverse selection caused by the subsidization of high risk drivers suggest that the contribution of no-fault,as such, to the reduction of driver care and deterrence was very small...[15]

Thus, it is the insurance regime, rather than the liability

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11 Gaudry,5.

12 By compensating accidents involving personal injuries but not material damages alone, the new regime created incentives for Québecois to classify as accidents with injuries accidents that would previously have been declared as accidents involving only material damages.Ibid. at 9.

13 Ibid. at 20.

14 Ibid. at 21-23.

15 Ibid. at 24.

regime, that is central to Gaudry's analysis.

Despite strikingly similar empirical findings, Devlin attributes increases in automobile fatalities directly to the abolition of civil suits for negligent driving. After estimating an increase of about 4.7 percent in fatal accidents as a result of the flat-rate premium structure,[16] and an increase of 9.62 percent in accidents involving fatalities, bodily injury or property damage as a result of a reduction in average level of driving care,[17] Devlin concludes that "irrespective of how the first-party insurance is priced" no-fault compensation reduces average driving care and increases the incidence of automobile accidents.[18] For two reasons, this conclusion ought be

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16 This figure combines a 0.99 percent "insurance price adjustment effect" on the demand for automobiles, and a 3.72 percent "income effect" on the demand for kilometres driven. Rose Ann Devlin, Liability Versus No-Fault Automobile Insurance Regimes: An Analysis of the Experience in Québec, Ph.D. Thesis, University of Toronto,1988, 170-86,194-201. Rose Ann Devlin, " Liability versus No-Fault Automobile Insurance Regimes: An Analysis of the Experience in Québec" (26 October 1988b),University of Toronto Law and Economics Workshop, 19-26. By causing the premiums of high-risk drivers to rise by about 1 percent, flat-rates would be expected to increase the relative proportion of high-risk drivers among the total driving population, and thus to increase the number of fatal accidents.Ibid. at 15,22.

17 Ibid. at 202-12, 215-20. While regression analysis actually generates elasticities of 26.74 percent for bodily injury accidents and 5.33 percent for property-damage only accidents, Devlin dismisses variations from the 9.62 percent derived for fatal accidents as reporting effects caused by the incentives created by the new regime to classify as accidents with injuries accidents that would previously have been declared as accidents involving only material damages. Supra, note 49.

18 Devlin (1988b) at 35.

cautiously received. First, by emphasizing a strong inverse relationship between driving care and no-fault compensation, Devlin downplays the deterrence effect of the injury itself; since monetary compensation often cannot perfectly alleviate non-economic losses (and since no-fault typically limits recovery for pain and suffering), Devlin's focus on the marginal impact of eligibility for monetary compensation seems inflated. Second, by minimizing the significance of first-party insurance pricing, Devlin ignores the important role of the insurance regime in shaping driver care and activity levels. In fact, while her model controls for total kilometres driven and for proportion of young male drivers among the driving population,[19] it fails to account for the elimination of experience rating under the Québec scheme.[20]As a result, any attempt to attribute lower average driving care to the abolition of tort liability, as opposed to changes in the structure of insurance premiums, is inherently problematic.

New Zealand, which also has a pure no-fault system and until 1982 had a flat-rating premium structure,[21] does not provide empirical evidence from which it is any easier to draw

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19 Devlin (1988a) at 206,212.

20 Devlin explicitly ignores the impact of this variable, on the questionable grounds that "in the real world the link between care and premiums is tenuous" since premiums adjust to care indicia only with a lag and are thus "fixed in any one period." Devlin (1988b) at 14-15.

21 Craig Brown, "Deterrence in Tort and No-Fault: The New Zealand Experience" (1985),73 California Law Review, 983.

conclusions. In a study that reviewed raw data on driving activity and accident rates in New Zealand before and after the introduction of the pure no-fault system in 1972, Brown[22] found "no significant increase in motoring activity" and "no noticeable increase in accident rates" as a result of the change in regime.[23] However, Brown himself acknowledges the considerable influence on the figures he reports of other factors, such as gasoline supply shortages and changes in motoring laws and policing activity.[24] Consequently, in the absence of multivariate analysis, his findings are of limited value. In a more rigorous study, McEwin compared fatal accidents in New Zealand and all Australian states and territories during the years 1970-1981. He reports that comprehensive no-fault schemes were responsible for a 16 percent annual increase in automobile fatalities per capita.[25] McEwin himself admits that "the problems involved in modelling road accidents" suggest that little weight should be placed on the size of the impact derived.[26]

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22 Brown,976.

23 Ibid. at 1001-2. While registered motor vehicles per capita continued a steady upward trend " most probably attributable to a wealth effect," the absolute numbers of automobile injuries and fatalities as well as the frequency of such accidents per kilometres travelled steadily declined after the passage of the Accident Compensation Act. Ibid. at 984-94.

24 Ibid. at 989,994-1001.

25 McEwin at 23.

26 Ibid. at 23.

It is difficult to support our earlier hypotheses about the relative deterrence effects of pure no-fault and threshold systems generally. It is even more difficult to draw from the empirical evidence any conclusions about the relative deterrence effects of the Québec system and threshold systems. However, given the impact of the flat-rate premium structure on deterrence, it is safe to say that on deterrence grounds the Québec system is inferior to the new Ontario system.

(b) Compensation - The Victim Coverage Perspective

(i) Percentage of Victims Compensated:

One would assume that with respect to the percentage of auto accident victims that are compensated to any extent, the difference between threshold no-fault and pure no-fault regimes would be largely insignificant. In a threshold regime all those who are able to sue are also eligible for no-fault benefits. This means that although a pure no-fault regime will bar a number of accident victims from compensation through the tort system which a threshold system would not, it would not deprive any of these claimants of no-fault compensation.

In Québec, it is estimated that the proportion of victims receiving any compensation increased by about 20% after the introduction of pure no-fault.[27] Of course, this estimate tells us nothing directly about how the Québec regime compares to threshold regimes on the criterion of percentage of victims

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[27] Slater (1986) 322, 334. Duff A,33.

receiving any compensation. However, it may be of some importance to note that this 20% increase over Québec's former fault-based system[28] is much larger than the 7% superiority of U.S. states that have threshold regimes over those that have tort regimes.[29]

(ii) Adequacy of Victim Coverage

The Québec system is not strongly dissimilar to the new Ontario system in terms of the extent of victim coverage, but in the final analysis it does less well than the Ontario system on this criterion. The no-fault benefits for the compensation of economic losses in the two systems are roughly comparable. However, in those cases that would have cleared the Ontario threshold, compensation for loss of income is lower in Québec for relatively high income earners. The systems are surprisingly similar with respect to the degree of compensation for non-pecuniary losses. In the Ontario system, non-pecuniary loss compensation may result in those cases that can sustain a tort claim, namely instances of death, permanent serious disfigurement, or permanent serious impairment of an important bodily function caused by a continuing injury which is physical

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28 Prior to 1978 the regime was based on the concept of quasi-delict in civil law. This regime is as fault based, if not more so, as a pure tort regime. For further explanation see Devlin (1988 a) at 46-54.

29 80% of auto accident victims receive some compensation from any source in tort states; 87% of auto accident victims receive some compensation in threshold states. Houchens at 16. See note 76.

in nature. In Québec, a lump sum of as much as $75,000 ($100,000 in 1991 and $125,000 in 1992) is payable for permanent after-effects of injury.[30] Nevertheless, this compensation for non-pecuniary loss, though significant, is not as great as the maximum tort award, which is $200,000.[31] In Québec, compensation for non-pecuniary loss is not available in the case of death as it is in Ontario (through the tort system). However, this difference is mitigated by the fact that the scheduled death benefits are much higher in Québec.

(c) Compensation - The Cost Internalization Perspective

The Québec system does away entirely with the notion of fault for corporal damages (injuries and fatalities)[32]. Its premiums are uniform for given classes of vehicles,which means that there is no risk-rating whatever within the system. It is clear,therefore, that the Québec plan is much inferior to the new

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30 The after-effects need not be physical in nature. Psychoses, chronic neuroses and personality disorders are covered. O.C. 1921-89, G.O.Q. 1989.II.74639-0.

31 In the trilogy of cases, Andrews, Teno and Thornton. the S.C.C. capped non-pecuniary damages at $100,000 (1978 dollars).

32 Vehicle damage claims remain outside the Québec plan and are administered by the private sector. These claims have been removed from the court system because of the statutory provision that the insured is compensated for his property damage by his own liability insurer who indemnifies him directly under the liability section of the policy; to the extent that the insured is not responsible for the accident (as in the new Ontario system). Fault is determined by an internal insurance fault schedule. Before fault is determined through the fault chart, though, insurers have to determine how an accident occurred.

Ontario system in terms of the internalization of the costs of high-risk driving to high-risk drivers.

In comparing the Québec and Ontario systems on the basis of the extent of the internalization of the costs of traffic accidents to driving activities generally, the evaluation is less obvious. In the Québec plan the no-fault benefits are primary sources of compensation. This contrasts with the Ontario plan in which the no-fault benefits are secondary to payments under income continuation benefit plans and to payments received under sick leave plans arising by reason of occupation or employment. At first impression, sources other than drivers are not bearing the cost of driving under the Québec system as they do in Ontario. This impression is misleading, however, for the Québec plan, which is government run, has been, since 1982, partially funded from general revenues.[33] It is not clear then which system is better at internalizing the costs of driving to the driving population.

(d) Operational Efficiencies

Since the number of lawsuits in pure no-fault regimes is smaller than that under threshold no-fault, and especially since the largest, and therefore most expensive, lawsuits are also

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33 A part of the existing tax revenues from fuel sales was earmarked to finance the public regime, but the tax rates on fuel were not increased. Gaudry, at 26, note 2. Devlin states that this tax was increased, but in 1982 it was discontinued. The amount of government funding arising in this way is in the 6% range. Devlin (1988 a) at 62.

eliminated, administrative costs will be lower in pure no-fault. Claimants' legal expenses, which are estimated to consume 10 to 15% of liability premiums in other jurisdictions Canada, will be lower, as will public expenditures on legal adjudication.

Even ignoring the effect of lower public expenditures on trials, the empirical evidence supports the contention that administrative costs will be lower in pure no-fault regimes relative to threshold regimes. According to the U.S. Dept. of Transportation study, the payout/payin ratio for verbal threshold states was 47.8%, and in Michigan 55.1%. These figures appear low in comparison to the ratio of 67% for the pure no-fault plan in Québec[34] (1979-84). However, this comparison is slightly misleading since in Québec the ratio of net compensation to premiums paid (at 58%) was higher than Michigan even under the former minimal no-fault regime. Other studies have also shown an improvement in the ratio with the change of regimes in Québec, although the size of it is more contentious. Devlin concludes that the elimination of the fault-based civil liability regime in Québec generated administrative savings of about 10%, while the creation of a public insurance monopoly was responsible for further savings of 14% as a result of cost savings in business acquisition costs (brokerage fees) and underwriting costs.[35]

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34 Ontario Task Force on Insurance, Final Report of the Ontario Task Force on Insurance (Slater Report) (1986) at 332. It is unclear if this figure accounts for the reduction in claimant legal expenses associated with no-fault compensation.

35 Devlin (1988a) at 257.

Osborne, on the other hand, is critical of the large size of the latter figure, as he sees no evidence to suggest that a public monopoly is any more efficient in underwriting insurance than a competitive private sector.[36] He also doubts that the administrative savings would be as high as 10%. He argues that with respect to insurers' operating expenses and claims adjustment costs (defence legal costs plus adjusters' costs) only the latter would be reduced with the introduction of no-fault. This is because there is no reason to conclude that the insurer's administrative infra-structure would shrink if the compensation were to change as long as insurance is sold on an individual basis. Osborne estimated that the reduction in this area would be no more than 5% for a regime change from minimal no-fault to pure no-fault[37]; the reduction for a regime change from threshold to pure no-fault would be even smaller.[38] In any case a pure no-fault regime is conceded to have some administrative cost saving over a threshold no-fault regime.

As for the other form of operational efficiency with which we are concerned-the speed at which the flow of payments is initiated - we would also expect an improvement over threshold regimes. This is because in a pure no-fault system no payment

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36 Osborne vol. 1 at 676-691.

37 The number of reviews (by the Régie) and appeals (to the Commission des Affaires Sociales) are not insignificant. In 1987 of the 35,000 claims, there were 5,000 reviews and a further 2,000 appeals. Many of these were over the question of non-pecuniary losses. Osborne vol. 1 at 460.

38 Osborne vol.1 at 522-525.

flows are delayed as a result of lawsuits. While there are no figures comparing threshold and pure no-fault regimes, the reduction in payment flow delays in pure no-fault relative to minimal no-fault is impressive:

Table 7.2

Percentage of Victims in Québec Who Have Received Their First Payment Per Month[39]

	< 1 month	< 2 mo.	< 3 mo.	< 6 mo.	> 6 mo.
liability claims in tort system[40] (1970/71)	5%	12%	18%	35%	65%
Present System	32%	70%	84%	96%	4%

Table 7.3

Percentage of Victims Compensated within Year in Québec[41]

Year	Percentage of Victims
1978	96.15%
1979	95.97%
1980	95.94%
1981	95.53%
1982	96.11%

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39 Fluet and Lefebvre (1986,165) cited in Devlin (1988a) at 74. Since tort delay is based on the duration between the accident and settlement, and no-fault delay measures the time between claim filing and first payment, this comparison exaggerates the difference between the two systems. Nevertheless, since only about 10% of tort claimants obtain advance payments before final settlement, and there is little reason to delay filing first-party claims, any exaggeration is probably slight.

40 For liability claims the first payment is also the final payment.

41 Devlin (1988a) at 72.

(e) Premium Costs

Devlin undertakes a comparison of premium levels in the Québec system and Québec's former civil law system[42]. To control for factors other than the change in regime, she takes as her dependent variable the average Québec premium minus the average Ontario liability premium. By subtracting Ontario premiums Devlin hopes to remove the effects of factors other than the change in regime, the assumption being that these factors will be equally present in Québec and Ontario and, therefore, the subtraction of Ontario's premium rate guarantees the subtraction of the effects of these factors plus some constant, k. The following table shows the results of Devlin's analysis.

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42 Ibid. at 59-68.

Table 7.4

Québec Minus Ontario Liability Insurance Premiums[43]
Increasing Riskiness of Driver Class ----->

Year	Class 02	Class 18	Class 08	Class 11	Class 10
	DR 3/5	DR 3/5	DR 3/5	DR 0	DR 0
Former Regime					
1972	12	15	17	61	73
1973	12	15	17	61	73
1974	11	14	16	58	58
1975	22	26	30	96	96
1976	31	40	43	156	156
1977	16	19	22	70	70
Present Regime					
1978	33	8	-11	-470	-470
1979	46	65	42	-406	-406
1980	43	64	39	-446	-446
1981	57	83	43	-569	-569
1982	89	-23	-87	-764	-924
1983	88	-9	-88	-703	-895
1984	74	40	-38	-709	-858
1985	62	17	-63	-763	-915
% Change in The Average of the two Periods	+265%	+41%	-188%	-820%	-878%

For purposes of comparison, one will recall that all premiums in the new threshold regime in Ontario are estimated to be between 22 to 35% lower than under the previous regime. It is not inappropriate to view the former Quebec civil law system and the former Ontario system as similar, given that they were both fault based. Consequently, some rough comparison can be made between premium levels in the new Ontario regime and the Québec

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43 Ibid. at 65.

regime by comparing the -22 to -35% figure for all driver classes to the above percentage-change figures. Clearly, low risk drivers pay much higher premiums and high risk drivers pay very much lower premiums in Québec relative to the Ontario threshold system.

It ought to be noted that after 1989 premiums in Québec will have to increase (unless the government increases its subsidization of the Québec plan) as a result of the increased lump sum payments for non-pecuniary loss. The budget of the Régie is expected to require an increase of 4.5% as a result of the amendments in bill 92 (1989), chapter 15.[44]

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[44] Osborne, vol. 1 at 464.

CHAPTER 8

ELECTIVE NO-FAULT

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I DESCRIPTION OF THE MODEL

(a) Introduction

Professor Jeffrey O'Connell of the University of Virginia Law School has developed a series a ingenious proposals for permitting either injurers or victims (in product, automobile, medical, and sports contexts) to choose between offering or securing expeditious compensation for economic and medical costs on a no-fault basis and waiving rights to tort claims, or waiving the no-fault benefits and pursuing tort claims for full tort measures of damages. For example, in the auto accident context, he envisages a scheme whereby drivers can choose to purchase either first-party no-fault insurance or third-party liability insurance.[1] If two people with first-party no-fault insurance collide with each other, each looks to his or her own insurer to cover his or her losses. If two people with third-party coverage collide, entitlements to recover would be resolved as they are at present under traditional tort-third-party insurance systems. If a person with first-party no-fault insurance collides with someone with third-party insurance, the first person looks to his or her own insurer to cover his or her own losses, and is not liable for the other person's losses, even when the first person was negligent. The second person would look to his or her own insurer for full tort measures of compensation if negligence on the part of the first person could be proved. This coverage would be treated as analogous to the conventional coverage of

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[1] O'Connell and R. Joost (1986).

claims against uninsured motorists.

These proposals have been advanced by O'Connell partly because of a recognition of the political resistance in the United State to further adoption of mandatory no-fault compensation schemes. This resistance no doubt partly reflects the influence of special interest groups, including the personal injury bar, to further curtailments of tort claims. O'Connell now seems prepared to gamble that if no-fault cannot prevail in the political market-place, it may well prevail as a matter of consumer choice in the economic market-place. Although he loads the characterization somewhat, he also acknowledges that there may be genuine divergences in consumer preferences as to tort-insurance regimes that preclude a judgment that all accident victims are clearly better off under one system or the other:

> The liability option might be a "better deal" than the no-fault option for individuals who have very high limits of both health insurance and income continuation insurance. It might also be preferred by individuals who view auto accidents as opportunities to "win" a large sum of money, rather than as misfortunes that can result in permanent injury, and who believe that there is no real danger of losing, because Medicare, Medicaid, and welfare will provide for them if they do not win a liability award. The liability option would seem to be more attractive to people who like to sue, who dream of making a "big killing," or who distrust insurance companies. The liability option would pay relatively more money than the no-fault option if the accident victim involved is one who has suffered only moderate injuries, such as back strain, whiplash, or fracture. Moderate injuries cause only limited medical expense and work loss, but they can cause a great deal of pain and suffering, compensable under liability insurance but not under no-fault insurance.
>
> The no-fault option would be better for individuals who want to be sure that catastrophic losses will not outstrip their own coverage no matter how high. It

> would certainly be better for individuals who do not have very high limits of both health insurance and income continuation insurance. It would also be the preferred choice of motorists who do not want to be paid for their pain and suffering but who do want swift, sure, and complete payment of their accident-caused personal economic losses. This option would be more attractive to people who dislike gambling, who eschew litigation, or who distrust lawyers. In general, the no-fault option would assure relatively more money than the liability option to an accident victim who suffers very severe injuries such as a severing of the spinal cord or a serious brain concussion. The economic loss of such victims can easily outstrip the limits of the average liability insurance policy.

This is not an entirely fair or complete characterization of the factors that would influence individual choice between the fault and no-fault options. In particular, it ignores the fact that low-income (who are often also young) and elderly individuals would prefer first-party no-fault because they are insuring lower than average prospective income losses. It also ignores the fact that high risk drivers and drivers of heavy vehicles (like trucks) who cause disproportionate injuries to third parties (drivers of lighter vehicles, motor-cyclists, cyclists, pedestrians) relative to themselves would prefer the no-fault option because it insulates them from liability (and hence coverage costs) to negligently injured third parties.

(b) <u>The I.B.C. Elective Model</u>

In 1989, the Insurance Bureau of Canada developed a detailed elective no-fault proposal which was submitted to the Ontario Automobile Insurance Board for review. It was ultimately

rejected by the Board.[2] However, because it goes further than any other no-fault proposal in detailing the choice options and operationalizing the choice regime, we have taken it as our exemplary model of elective no-fault, although numerous variants of choice models can be devised.[3]

Under the proposed elective system, motorists in purchasing automobile insurance would choose between purchasing a tort policy or purchasing a no-fault policy. The tort policy would provide the same third-party liability, uninsured motorists coverage, and comprehensive and collision coverage as provided by the standard automobile insurance policies written in Ontario prior to the adoption of the new threshold no-fault system and similar to policies currently been written in Alberta. However, the tort policy would contain no no-fault benefits at all. The IBC argues that in order to keep premiums for the tort policy relatively close to those applicable to the no-fault policy, so as to present consumers with a realistic choice, no-fault benefits should be excluded from the tort policy. Moreover, the IBC considered that the tort policy option would be particularly attractive to consumers who hold accident coverage through employer group insurance or through privately placed insurance, which would make any no-fault benefits redundant to them and indeed duplicative. The tort policy option is also predicated upon tort reforms with respect to prejudgment interest,

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2 Ontario Insurance Board (July, 1989).

3 See Symposium Issue, San Diego L. Rev. (1989).

collateral benefits, gross-ups for income tax, and no legal costs being payable for claims under $10,000.

The IBC proposed no-fault option would provide the following coverage:

(1) Medical and rehabilitation benefits up to $500,000.

(2) Long-term care benefits up to $500,000.

(3) Disability benefits up to $600 per week.

(a) Employed Persons

Entitlement for a employed person would be 90% of net income to a maximum of $600 per week. Payments would continue for up to two years if the insured were unable to return to the job he or she had at the time of the accident and thereafter for as long as the insured could not take any job for which he or she was reasonably suited. The payments to the totally disabled would continue for life subject to an offset for pensions after age 65. These disability benefits would be subject to collateral benefit offsets with respect to unemployment insurance or other wage-continuation plans.

(b) The Deemed to be Employed

The deemed to be employed would be entitled to 90% of net income to a maximum of $600 per week. Persons in this category would have to be between the ages of 16 and 25 and have worked six of the twelve months prior to the accident.

(c) Students

Elementary school students would receive $1000 for each lost school year plus $340 per week commencing at age 19 if the disability lasted that long and rendered such person unable to attend school. A secondary school student would receive $2,000 for loss of the school year and again $340 per week commending at age 19. College or university students would receive $4,000 for the loss of the school year and again $340 per week when no longer entitled to loss of school year benefits.

(4) Funeral Expenses up to $3,000

(5) Death Benefits up to $200,000

Death benefits would be related to income. The death of a head of household or spouse would lead a lump sum payment equal to four times the gross employment income of the deceased as derived from the last income tax return filed before death. The estate of a dependent child or the estate of a person with no dependents would receive $5,000 on death.

(6) Housekeeping and Child Care Services

An amount of $200 per week maximum would be payable on the basis of reasonable expenses incurred for up to three years for housekeeping services necessitated by the injury or death of a person who normally provides these services. In addition to the $200 per week for housekeeping services, a further $200 per week

(with a further $50 per week for each additional dependent child to a maximum of $350 per week) would be payable for child care expenses when the person normally providing the child care is disabled.

(7) Options

All of the above no-fault benefits would be capable of being increased at the option of the policy-maker. However, the coverage outlined should cover the needs of over 90% of Ontario consumers.

(8) Indexing

After an accident has occurred, the disability benefits for loss of employment income would be indexed to the Consumer Price Index but not to exceed 6% in any one year.

(9) Coverage per Claimant

All the above payments would be made on a per claimant basis as opposed to a per accident basis. Hence, regardless of the number of insured persons injured in an accident, the above limits would apply separately to each person so injured.

(10) Fast Resolution of Disputes

The IBC proposed an Alternative Dispute Resolution process involving mediation and if necessary binding arbitration with respect to the propriety of any payments claimed by an insured

under a policy. The objective would be that all such disputes would be resolved by a totally independent mediator or arbitrator within 30 to 90 days of the dispute arising.

(11) Residual Liability Coverage

Where automobiles insured in Ontario are operated outside Ontario, there would be third-party liability coverage under the no-fault policy option for accidents occurring outside of Ontario. The no-fault benefits would be payable to all insured persons regardless of where an accident occurs in North American.

It will be noted that under the no-fault policy option, no payments are provided for non-pecuniary losses.

(12) Implementation Proposals

Under additional proposals developed by the IBC, the following rules would govern choices made by insureds:

1. All persons resident in Ontario would be deemed to have chosen the tort policy until the election has been made to be insured by the no-fault policy.
2. The person buying the automobile insurance makes the choice for his or her spouse as to whether a tort policy or no-fault policy is purchased. This decision binds the policy-holder's spouse and their relatives who are financially dependent on them.
3. While the owner of more than one automobile must insure all such automobiles in one form or the other, households with

more than one vehicle owned separately by members of the household can insure those vehicles differently. When spouses owning separate vehicles choose different options, dependent children are bound by the decision of the parent that purchases the no-fault policy option.

4. Policy-holders would be at liberty to move from the no-fault system to the tort system or vice-a-versa at will provided that the form of insurance existing at the time of an accident will govern payment for claims with respect to that accident.

5. Those who have not elected to choose a no-fault form of policy remain in the tort system. For example, persons who are presently not insured under an automobile policy i.e. persons who do not own a car and are not the spouse of a person owning a car living in the same household or financially dependent relatives of the policy-holder or his or her spouse will not be deemed to have made any choice and hence will remain under the tort system of compensation.

6. Once a person has elected to make a choice, it is irrelevant whether the insured person is a driver, a passenger, or a pedestrian when the injury occurs anywhere in North America.

7. In sharp contrast to Professor O'Connell's initial proposal, which contemplated that in an accident involving drivers who had elected the tort option the right to sue each other (and each other's insurers) would be preserved, the IBC proposal contemplates that all claims must be asserted directly

against the insured's own insurer and against no one else. This is not only true with respect to the no-fault option but also the tort option. In other words, anyone insured under either type of auto insurance policy simply claims against the insurance company that issued that policy.

8. Where the motor vehicle accident happens outside of Ontario, the no-fault benefits are still payed to the insured if the insured has chosen the no-fault form of coverage. However, the insurer will have a right of subrogation if the accident occurs outside of Ontario.

9. Persons resident outside of Ontario who are involved in accidents in Ontario may normally sue only in tort in Ontario.

10. No insurer is entitled to subrogation against any other insurer or any other person for payments made under either the no-fault policy option or the tort policy option if the accident occurs in Ontario and the person responsible for the accident has either form of policy.

11. For accidents occurring in Ontario, no pedestrian injured by a private passenger vehicle could sue the owner/driver of such vehicle if the pedestrian was insured by an automobile insurance policy of either type. Such claim is made against the pedestrian's own insurer depending on the choice made as to form of coverage. Non-insured pedestrians could sue as at present.

12. For accidents occurring in Ontario, no insured occupant of a

private passenger vehicle could sue any tortfeaser. The claim must be asserted against the insurer of the claimant.

II EVALUATION OF THE MODEL

(a) Deterrence/Prevention

The IBC claims that there would be no substantial difference between the insurance rating practices applicable to the tort policy option and the no-fault policy option. In each case, similar criteria would be applied in order to set premiums. Criminal Code or Highway Traffic Act convictions, as well as 'at fault' accidents, could lead to premium increases or surcharges with respect to both kinds of policies. To the extent that state regulatory policies permit, age and sex would remain relevant rating variables with respect to both classes of policy.

This is the area where the elective no-fault concept has attracted most criticism. Both Professor George Priest of the Yale Law School[4] and Professor Jack Carr of University of Toronto Department of Economics[5] have argued vigorously that elective no-fault is subject to serious adverse selection problems. In particular, they claim that higher risk, more accident prone drivers will elect into the no-fault option because even with the rating variables applied as above, drivers whose activities or conduct causes disproportionate losses to third-parties relative to themselves will not find these losses

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[4] G. Priest (1988).

[5] J. Carr (1988).

reflected in their first-party insurance premiums. Moreover, to the extent that they are largely covered for their own medical and pecuniary losses, even incentives to avoid activities or conduct that may be dangerous to themselves will be muted. This criticism is, of course, similar to the concerns that have been expressed with respect to other no-fault regimes canvassed earlier in this study. However, the argument here goes further in suggesting that a stable equilibrium between consumers who elect the no-fault option and those whose elect the tort option may not exist. That is to say, as an increasing number of high risk drivers elect into the no-fault policy pool, drivers who have elected into the tort policy pool will find that their premiums escalate, given that under the IBC proposal insureds must press their tort claims against their own insurer and pay the premiums that reflect the extent of these claims. Thus, consumers who elect into the no-fault pool will in effect externalize some significant fraction of their accident costs on to consumers who have elected into the tort pool. With an increasing divergence between the average premiums associated with policies in the two pools, consumers who initially elected into the tort pool will find this option increasingly unattractive and may well be induced to switch subsequently into the no-fault pool, thus ultimately turning the regime into a <u>de facto</u> mandatory no-fault regime, with similar safety properties to the Quebec pure no-fault regime.

It is difficult to deny some force to these criticisms of

the elective no-fault model. However, it is also difficult to predict empirically how strong these adverse selection tendencies are likely to prove, in part because it is difficult to assess the weight that consumers will attach to other factors that bear on their choices. For example, consumes who do not have any collateral sources of accident coverage and place significant value on generous coverage of pecuniary losses incurred as a result of an accident, whether caused by someone else's fault or not, and also attach significant weight to rapid initiation of a stream of payment, will find the no-fault policy option attractive for these reasons. Conversely, consumers who have substantial collateral sources of accident coverage, to which the no-fault benefits are secondary, will find the no-fault option correspondingly less attractive and the tort option correspondingly more attractive. As well, the adverse selection concern assumes significant deterrence properties for the tort system, even with third-party liability insurance, and further assumes that with extensive risk-rating not only of third-party liability insurance but also the first-party no-fault policy package, consumers in their choice of levels and quality of driving activity will be significantly influenced by differences in the insurance premium implications of their conduct under one regime relative to the other. It will be recalled that we discussed this issue in the context of the Quebec pure no-fault regime, where the empirical evidence on the adverse safety effects of the Quebec regime leaves open some ambiguity as to

whether extensive risk rating of first-party premiums would mostly correct for the safety effects, or whether even with extensive risk-raking of first-party losses, there would still be a significant diminution in safety incentives, given that losses negligently inflicted on third parties will not be reflected in these first-party premiums, however risk-rated. A plausible view is that these safety losses are likely to be relative small, and could be more directly and effectively addressed through enhanced public sanctions directed to the regulation of traffic safety as outlined in Chapter 3.

(b) Compensation - The Victim Coverage Perspective

Under an elective no-fault regime of the kind proposed by the IBC, it is difficult to make any firm empirical judgments as to what percentage of traffic accident victims will obtain compensation and how adequate the levels of compensation are likely to be. Obviously, this centrally turns on how many consumers would elect into the no-fault or tort policy options. For those opting into the no-fault option, the IBC no-fault benefit package provides relatively generous coverage of most forms of pecuniary losses, although removing any entitlement to non-pecuniary losses. For consumers electing into the tort policy option, there would be no no-fault benefits at all, so that where an insured is unable to prove to his or her insurer that some other driver was wholly or partially at fault for an

accident that has resulted in losses to the insured, he or she would be without any direct coverage. However, to the extent that one assumes that most people who elect into the tort policy option are doing so because they are already holding adequate group or private accident insurance coverage to which they can have recourse in this event, this concern is diminished.

(c) Compensation - The Cost Internalization Perspective

Obviously, for reasons already noted, the IBC proposal largely relieves negligent drivers of any financial responsibility for accident costs imposed on innocent third-parties. This is most obviously the case for consumers who elect into the no-fault option, but even for consumers who elect into the tort option they will not face premium costs for losses negligently inflicted on third parties, given that each insured, even under the tort policy option, claims for tort damages on a first-party basis only against his own insurer. To the extent that extensive risk-rating features are retained with respect to both the no-fault and the tort policy options, a substantial fraction of accident costs will still be internalized to high-risk drivers, in contrast to the Quebec pure no-fault system with its flat-rating features. To the extent that the IBC proposal contemplates that collateral benefits would be subtracted both from no-fault benefits and tort entitlements, this might be viewed as externalizing some fraction of total accident costs onto sources unrelated to driving activities. It is not clear

from the IBC proposal whether OHIP would retain subrogation rights with respect to medical expenses incurred by victims of traffic accidents either with respect to no-fault benefits or tort entitlements. To the extent that this subrogation right is curtailed or foreclosed, as under the new Ontario threshold no-fault regime, obviously traffic accident costs are being externalized onto the general body of taxpayers.

(d) Operational Efficiency

Here, it will be recalled from earlier chapters, we are concerned with both the amount of premium dollars consumed in administrative costs and the timeliness of the initiation of a flow of payments to injured traffic accident victims. Under the elective no-fault proposal of the IBC, it is difficult to offer firm judgments on these two issues as much obviously depends on what percentage of consumers elect into either of the two policy options. If a large percentage elect into the no-fault policy option, savings in administration costs and gains in improvements in timeliness of payments of the kind described in earlier chapters canvassing other no-fault options are likely to be realized. Even in the case of consumers who elect into the tort policy option, given that under the IBC proposal this is structured on a first-party basis where the insured claims the tort damages from his own insurer with respect to injuries caused by negligent third parties, it might be conjectured that with fewer parties involved, administrative costs can be conserved and

claims resolved more expeditiously, thus leading to earlier payments.

One administrative issue that particularly agitated insurance brokers in Ontario with respect to the IBC proposal and partly led to its rejection by the Ontario Automobile Insurance Board was the possibility of extensive litigation and liability over whether consumers had made informed choices between the two options, in cases where ex post a consumer would find it to his or her advantage to reverse election. While government prescribed forms setting out the choices and requiring signature by the consumer, leading to a conclusive or rebuttable presumption of an informed choice, would have addressed these concerns in the IBC view, the brokers' association and the Board remained unconvinced.

(e) Premium Costs

The IBC estimates that for its new tort policy option, assuming tort reform and no no-fault benefits, for compulsory coverage only, the average premium as of January 1, 1989 would be $561, which would be a $137 or 32.3% increase from the then capped market rate for the existing standard policy, but a $93 or 14.2% decrease from what the IBC considered as adequate costing of the then standard policy. For the average full package of coverage i.e. compulsory coverage plus collision and comprehensive) under the new tort policy option, the IBC estimated a premium of $850, which would entail a $120 or 16.4%

increase from the then capped market rates for the standard policy, but a $69 or 7.5% decrease from adequate costing for the then standard policy.

With respect to the proposed new no-fault policy option, assuming tort reforms, in particular in this case subtraction of collateral benefits, the IBC estimated a premium for basic no-fault coverage of $433, which would entail a $9 or 2% increase from the then capped market rate for a standard policy, but a $221 or 33.8% decrease from an adequate costing of the then standard policy. The IBC further estimated that for the new no-fault policy option providing not only basic coverage but also collision and comprehensive coverage, the average premium would be $680, which would entail a $50 or 6.8% decrease in cost from the then capped market rate for the standard policy, or a $239 or 26% decrease in cost relative to an adequate costing of the then standard policy. Thus, if one accepts the IBC premium estimates, the new tort policy (with tort reform and accident benefits) would be modestly cheaper than an adequately costed standard policy (at that time similar to the current standard policy in Alberta), and the no-fault policy option would be very substantially cheaper than an adequately costed standard policy of the kind presently in place in Alberta. It should be noted, however, that these cost estimates assume away the adverse selection problem that critics of the elective no-fault concept, like Professors Priest and Carr, regard as a serious deficiency of the regime. If their predictions are accurate, and accidents

rates and thus injury costs substantially increase under an elective no-fault regime, the IBC premium costings would require substantial upward revision.

CHAPTER 9

ALBERTA AUTO ACCIDENT COMPENSATION REFORM:

A COMPOSITE EVALUATION OF THE OPTIONS

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I INTRODUCTION

In providing a composite summary evaluation of the various reform options against our five evaluative criteria, three important caveats should be borne in mind. First, while the evaluation attempts to take account of both theoretical *a priori* hypotheses and available empirical evidence as to the likely effects of each option, in the end our judgment are necessarily qualitative and to some extent subjective rather than quantitatively hand-edged, and thus are reasonably contestable in a number of cases. Second, our judgments pertain only to the particular exemplary models chosen as representative of a given option and not to the vast number of variations on each option either extant or possible. Generalizations beyond the particular models chosen for analysis would be highly precarious. Third, as we move through the various no-fault alternatives to the current Alberta model, we are assuming in every case (including the Alberta model) that the regulatory and public enforcement reforms and tort reforms discussed in the study have been implemented. We thus hold these two elements in the reform firmament constant as we review the other reform options.

II THE EVALUATIVE CRITERIA APPLIED

(a) Deterrence/Prevention

On a scale of 1-5 (best to worst), we would rank the reform options reviewed with respect to the deterrence or prevention of accidents as follows:

Table 1

Deterrence/Prevention

Status Quo	1
Enhanced Add-On	2
Threshold No-Fault	3
Elective No-Fault	4
Pure No-Fault	5

The reasoning underlying our judgment is straightforward. As one progresses through the various no-fault options, more and more cases are taken out of the tort system, and fewer and fewer wrongdoers are forced to bear the costs they inflict on others through their wrongdoing, thus attenuating incentives to adopt optimal levels of care towards others. While a sensitive risk-rating regime for first-party no-fault premiums can internalize many of the self-inflicted costs of careless driving, costs inflicted on others will not be reflected in these premiums and even the incentives to avoid injury to oneself will be more muted under a no-fault regime relative to the status quo where a large proportion of self-inflicted costs of careless driving are borne by the victim.

(b) Compensation - The Victim Coverage Perspective

This evaluative criterion is sensitive to two factors: the percentage of all traffic victims covered for personal injuries

by the compensation regime, and the adequacy of coverage. While the first factor is straightforward enough, adequacy of coverage raises the question of whether inclusion or exclusion of non-pecuniary damages is a positive or negative feature of a scheme. From an optimal insurance perspective, exclusion is arguably positive. From a full loss compensation perspective, it is clearly negative. While we recognize that this issue is highly controversial, we have chosen to apply the victim coverage criterion weighing both percentage of victims covered and percentage of all losses, pecuniary and non-pecuniary, covered by a scheme.

Table 2

Compensation - The Victim Coverage Perspective

Enhanced Add-On	1
Threshold No-Fault	2
Pure No-Fault	3
Elective No-Fault	4
Status Quo	5

Our ranking here, which may be debatable even in our own terms, is that the exemplary enhanced add-on no-fault scheme ranks best, because most traffic victims are covered, and by preserving tort claims in all cases, the right to sue wrongdoers for residual economic losses and especially non-pecuniary losses is preserved for that subset of traffic victims with valid

negligence claims. Threshold no-fault ranks second, because most traffic victims are covered, and a small subset retain the right to sue for residual economic losses and for non-pecuniary losses if the severity of their injuries exceeds the threshold and they otherwise have valid negligence claims. Pure no-fault ranks third: while most traffic victims are covered, claims for non-pecuniary losses are tightly constrained, and residual economic losses are not covered. Elective no-fault is ranked fourth, rather speculatively. On the assumption that a majority of consumers will elect the no-fault option and drivers electing into the tort option will typically have substantial collateral accident coverage, most (but not all) traffic accident victims will be covered for pecuniary losses whether at fault or not, while some subset will preserve the right to press tort claims for residual economic losses and non-pecuniary losses. The status quo is ranked fifth, because probably about 40% of traffic accident victims are not covered by the regime at all (or covered only minimally), although for those with a valid tort claim full economic and non-pecuniary losses are recoverable.

(c) Compensation - The Cost Internalization Perspective

Our ranking here, not surprisingly, tracks our ranking of the options with respect to deterrence-prevention.

Table 3

Compensation - The Cost Internalization Perspective

Status Quo	1
Enhanced Add-On	2
Threshold No-Fault	3
Elective No-Fault	4
Pure No-Fault	5

Our reasoning is as follows. The Alberta status quo (maximum tort, minimum no-fault) most fully comports with corrective justice rationales for the allocation of accident costs by allocating these costs to wrongdoers where they have inflicted injury on others or by denying recovery to victims whose own conduct is faulty. The enhanced add-on system preserves a substantial tort component so that the same argument applies mutatis mutandis, although to the extent that some claims that would otherwise have been validly pressed by victims against injurers are redirected to the first party no-fault component of the scheme and to the extent that the abolition of the collateral benefits rule (as proposed by Osborne) redirect traffic accident costs to non-traffic related forms of first-party or social insurance, accident costs will be neither fully internalized to faulty drivers nor even to driving activities at large. We rank the threshold no-fault option (at least as exemplified by the new Ontario scheme) third, because it is even less sensitive to corrective justice considerations, by removing a higher

percentage of cases from the tort system and thus shielding a higher percentage of wrongdoers from the consequences of their wrongdoing, while also externalizing a significant percentage of traffic accident costs beyond driving activity altogether through abolition of the collateral benefits rule and repeal of the right of subrogation of the provincial health care system for medical costs incurred as a result of driver wrongdoing towards others. We rank elective no-fault tentatively fourth because negligent drivers who have elected into the tort option will bear their own injury costs and extensive risk-rating of both no-fault and tort policies will internalize a substantial fraction of accident costs to high-risk drivers, although subtraction of collateral benefits from both no-fault and tort recoveries will externalize some traffic accident costs to sources unrelated to driving activities. We rank the pure no-fault option fifth, because it abandons any attempts to internalize accident costs to wrongdoers on an individualized basis, and depending on the risk rating regime for first-party no-fault premiums that is adopted may heavily attenuate internalization of accident costs to wrongdoers or riskier classes of drivers through premium structures. If pure no-fault benefits were also made secondary to other non-traffic related forms of first-party or social insurance, externalization of traffic accident costs beyond driving activity altogether would occur.

(d) Operational Efficiency

This evaluative criterion is sensitive to two factors: the percentage of premium dollars consumed in administrative and transaction costs, and the timeliness of compensation payments. Our evaluation of the options, on this criterion, is as follows:

Table 4

Operational Efficiency

Pure No-Fault	1
Threshold No-Fault	2
Elective No-Fault	3
Enhanced Add-On	4
Status Quo	5

Both theory and the empirical evidence suggest that pure no-fault schemes deliver compensation to victims at lower administrative cost and in a more timely fashion than the other options. Threshold no-fault ranks second, because a high percentage of cases are resolved outside the tort system on a no-fault basis, although costs of litigating the application of the threshold are an offsetting factor. Elective no-fault ranks third because we assume that a majority of drivers will elect into the no-fault option, and those electing into the tort option will deal only with their own insurer on a first-party basis with respect to claims. Enhanced add-on ranks fourth, because while a significant percentage of cases are presumably resolved

expeditiously and at low cost on a no-fault basis, the right to sue in tort is preserved in all cases (and may be aggressively exercised, given the "cushion" of the no-fault benefits), with attendant administrative costs and delays in payments of compensation beyond the no-fault benefits. The status quo ranks fifth, obviously enough, because the tort component is largest - issues of liability and quantum are required to be determined in every case - and administration and transaction costs and delays in compensation payments will be greater than under any other option.

(e) Average Premium Costs

With respect to average premium costs, we rank the options as follows:

Table 5

Average Premium Costs

Pure No-Fault	1
Threshold No-Fault	2
Elective No-Fault	3
Status Quo	4
Enhanced Add-On	5

We rank pure no-fault first in terms of premium costs, at least if non-pecuniary damages are largely excluded from coverage, and given administrative savings noted under (d).

Threshold no-fault ranks second, because of the same two factors, and also because under the new Ontario scheme some traffic accident costs are externalized to non-traffic related forms of first-party and social insurance by virtue of the scheme providing only secondary coverage. Elective no-fault is tentatively ranked third, on the assumption that a majority of drivers will elect into the no-fault option and because those electing into the tort option will not be paying for any no-fault benefits and arguably conserve on administrative costs through the first-party nature of the tort coverage, thus reducing premiums below those applicable to maximum tort minimum no-fault regimes (the Alberta status quo). Averaging premiums across the two pools would suggest a ranking between threshold no-fault and the status quo. The status quo is ranked fourth, because non-pecuniary losses will account for a significant percentage of premium dollars and because of higher administrative costs than the other options. Enhanced add-on is ranked fifth (somewhat tentatively) because while a significant fraction of claims will be settled on a no-fault basis, the right to sue for residual economic losses and for non-pecuniary losses is retained in all cases, and there is some evidence that payment of economic losses on a no-fault basis encourages more aggressive litigation strategies with respect to these other losses.

III A COMPOSITE EVALUATION

Consolidating the evaluations reached of the options reviewed under the five foregoing criteria yields the following matrix.

Table 6

Composite Evaluation of Options

	STATUS QUO	ADD-ON	THRESHOLD	PURE NO-FAULT	ELECTIVE NO-FAULT
Deterrence	1	2	3	5	4
Compensation (Coverage)	5	1	2	3	4
Compensation (Internalization)	1	2	3	5	4
Operational Efficiency	5	4	2	1	3
Premium Costs	4	5	2	1	3
TOTAL	16 (3.2)	14 (2.8)	12 (2.4)	15 (3.0)	19 (3.6)

The important policy implications that emerge from this matrix is that in aggregate most of the options reviewed achieve similar rankings, although the rankings diverge widely within particular criteria and across criteria. Much thus turns on how one wishes to weight particular criteria. With respect to elective no-fault, it appears to achieve none of the three substantive goals of an accident compensation scheme very well, and does so at relatively high operational and premium costs. With respect to pure no-fault, it also appears to achieve none of the three substantive goals of an accident compensation regime very well, but whatever it does achieve in these respects, it does so at relatively low cost. Threshold no-fault does somewhat better on all three substantive goals but entails somewhat higher operational and premium costs. Enhanced add-on no-fault does better again on the three substantive goals, but entails significantly higher operational and premium costs. The status quo - Alberta (maximum tort - minimum no-fault) achieves two of the substantive goals of an accident compensation regime relatively well (deterrence, compensation - cost internalization), but one very badly (compensation - victim coverage), but achieves the two goals that it serves relatively well at high operational and premium costs. Thus, when all the theorizing is done and all the empirical evidence on the properties of alternative accident compensation regimes has been gathered and analyzed, the ultimate policy choices are unavoidably social and political, in the sense that normative

weights must be attached to competing evaluative criteria which in turn reflect competing philosophical perspectives on the goals of accident law. We are no better equipped to make these choices than any other member of the public or polity who has taken the time and made the effort to understand the choices and the trade-offs that each entails. Hopefully, however, this study will advance public understanding of the choices and trade-offs that must be confronted.

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